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

July 4, 2003

Prepared by Cate Jenkins, Ph.D.*
Environmental Scientist, Waste Identification Branch
Hazardous Waste Identification Division
Mail Code 5304W
Office of Solid Waste
Office of Solid Waste and Emergency Response
US Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

jenkins.cate@epa.gov

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

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

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

DATE: July 4, 2003

MEMORANDUM

SUBJECT: **EPA Office of Inspector General's 1/27/03 report:**
"EPA's Response to the World Trade Center Towers Collapse"
— **a documentary basis for litigation**

TO: WTC Team, EPA Inspector General's Office: Jim Hatfield, Chris Dunlap, Geoff Pierce, Dana Gilmore, Sarah Fabirkiewicz, Steve Schanamann
Nikki Tinsley, EPA Inspector General
Mary Boyer, EPA Ombudsman

FROM: Cate Jenkins, Ph.D., Environmental Scientist*
Hazardous Waste Identification Division, OSW
jenkins.cate@epa.gov

The attached report is in response to the 1/27/03 interim report from the EPA IG titled "EPA's Response to the World Trade Center Towers Collapse." The attached report provides additional detailed documentation to support some of the conclusions of the IG WTC Team, as well as documentation of some erroneous conclusions made by the IG WTC Team.

In addition to the issues addressed by the EPA IG report of 1/27/03, the attached report addresses two additional issues that I believe should be subject to the IG investigation.

The first concerns EPA's convening of a new forum with the expressed purpose of ensuring consistency in analytical methods throughout the EPA. The problem of the disparity between test methods after the WTC and the Libby, MT Superfund site is explicitly named as a precipitating factor for the formation of this new forum. As explained in greater detail in Section M of the attached report, the formation of this new forum is inappropriate and suspect, and should instead be a matter for active investigation by the IG.

The second concerns violations by EPA of the Federal Advisory Committee Act, which has

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resulted in a subversion of the principles of the Administrative Procedures Act upon which it was based, as well as violations of ethics regulations and presidential directives requiring federal employees to conduct the country's business in an impartial manner, preventing real or apparent conflicts of interest. As a result of the WTC collapse, EPA's Office of Solid Waste and Emergency Response initiated a re-evaluation of the Agency's risk and carcinogenicity classifications for asbestos. EPA's Office of Research and Development is currently conducting this reassessment. Insufficient notice to the public was provided for participation in the process, experts drafting the reassessment have apparent conflicts of interest, and key research appearing in peer reviewed publications have been omitted and ignored in the reassessment. See Section U of the attached report.

Please do not hesitate to contact me for any additional information or for electronic versions of any of the documents cited in the attached report.

cc: Affected parties and other responsible officials

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EPA vermiculite study – dust less than 0.1% causes hazardous air levels

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A: INTRODUCTION

This report has been transmitted to the EPA Office of the Inspector General (EPA IG), responsible for assessing EPA's performance in the aftermath of the World Trade Center (WTC) disaster, as commentary on the EPA IG interim report on that subject dated 1/17/03. This report has also been transmitted to the EPA Ombudsman.

This report may also be useful as a review of the available documentation of what EPA and other officials told the citizens of New York City about the hazards of WTC fallout, and the probability of the truth of these statements. It also could serve as a primer for those in the initial steps of redressing this wrongful harm through litigation.

Press reports are included in this report for two reasons. First, they provide contemporaneous accounts from journalists who were on the scene actively investigating as trained observers. Second, in a legal proof, it is often necessary to demonstrate that the defendant knew or should have known that there was a problem. Press stories establish this by showing certain facts and issues were the matter of public notoriety. Memoranda and other writings by federal officials who documented at the time violations of law and official EPA guidance also serve this purpose, and are quoted as well.

This is not just a retrospective about what happened in the past. It is ongoing. NYC is still heavily contaminated with WTC fallout. EPA is currently conducting its limited and ineffectual cleanup of a small number of residences in lower Manhattan. Much more needs to be done.

When Governor Christine Todd Whitman, EPA Administrator, traveled to address NYC on September 13, 2001, she delivered a promise from President Bush. No expense was to be spared in the cleanup. This promise is still no less the due for the living victims of the WTC.

> "We're getting in there and testing to make sure things are safe," Whitman says. "Everything will be vacuumed that needs to be, air filters (in area buildings) will be cleaned, we're not going to let anybody into a building that isn't safe. And these buildings will be safe. The president has made it clear that we are to spare no expense on this one, and get this job done." . . . *[Asbestos Alert, 9/14/01, by David France and Erika Check, Newsweek, http://msnbc.com/news/629268.asp?0sp=w12b2&cp1=1]*

> "The President has said, 'Spare no expense, do everything you need to do to make sure the people of this city and down in Washington are safe as far as the environment is concerned,' " Whitman said. . . . *[EPA chief says water, air are safe, 9/14/01; by Susan Ferraro, New York Daily News]*

B: EPA DENIALS OF ANY LONG vs. SHORT TERM HEALTH RISKS -- INDOORS OR OUTDOORS

"Did the available monitoring data and analyses of that data support EPA's public pronouncements regarding air quality and associated health risks resulting from the collapse of the WTC towers?

. . .

"Anecdotal evidence and first person interview (researchers, others who observed practices first hand) indicate (a) website useless to many until too late – no electricity, no phone, no computer, etc. (b) some missed subtleties of EPA's intended message (outdoor air only; long term only; outside ground zero only)" ***[1/27/03 EPA IG report]***

This and following sections provide the written record of who said what and when. It contains extensive excerpts of governmental statements and contemporaneous press coverage.

This section documents EPA claims of the safety of both indoor and outdoor air, and no long term or short-term hazards. Section C documents similar claims by NYC officials. Section D of this report documents where both EPA and NYC admit to hazards, contradicting the claims in the first two sections of this report.

EPA excuse – "Public missed subtleties in its intended message"

The EPA IG report of 1/27/03 appears to give credence to shifting the blame to the public, saying it missed some sort of subtleties in the message EPA was trying to convey:

> . . . some missed subtleties of EPA's intended message (outdoor air only; long term only; outside ground zero only)" . . . *[1/27/03 EPA IG report]*

When the public heard EPA say that there were no health risks, without any differentiation between long and short term risks, the public rightfully assumed EPA's statements included the later development of cancer from any asbestos exposures. EPA also broadcast the explicit message that there were no long term health risks, or said that risks were "very low." EPA cannot hide behind some revisionist claim that there message had hidden subtleties that the public missed. EPA officials only talked about the irritant effects of the dust, and quickly followed up saying there was no cancer hazard from asbestos.

Compendium of EPA statements – "No indoor/outdoor hazards, no long term effects"

The following are EPA statements about both indoor and outdoor air. There were no subtleties. EPA even said in its 9/14/01 press release that INDOOR air would be safe in downtown buildings, and made other explicit statements that measurements of outdoor air are representative of exposures indoors.

If EPA believed at any time that quotations by the press were inaccurate or misleading, it did nothing to make any corrections. EPA could have written letters to the editor. It could have enlisted the aid of Mayor Guiliani to clarify its message. Most importantly, EPA could have issued its own press releases if it believed it was necessary to set the record straight. EPA issues press releases on a wide range of subjects frequently, both from Headquarters, and also at the Regional level. EPA maintains an archive of all of these press releases as well on its web site. A review of past Headquarters and Regional press releases reveals EPA made no attempt to clarify any press stories, so it must be assumed that the information in the press was an accurate portrayal of EPA statements.

9/13/01

As rescue efforts continue and the rubble is removed, Environmental Protection Agency officials are finding a new problem in the dust: elevated levels of asbestos. Tuesday night, one sample of dust from the ground at the rescue site contained four and a half times what the EPA worries about.

. . .

[ABC News, What's in that Smoky Cloud? Concerns about Air Quality, Last Updated: Sep 13, 2001, http://abclocal.go.com/wabc/health/WABC_oncall_091301asbestos.html]

9/13/01

Despite fires and a pungent odor at the wreckage of the World Trade Center, most tests for contaminants in New York's air have not triggered alarm, health officials say. U.S. Environmental Protection Agency spokeswoman said Wednesday that EPA officials "really don't detect any real danger" in air and dust tests. And New York Mayor Rudolph Giuliani echoed the sentiments this morning.

. . .

The EPA continues to test air and dust around the attack site. Results released today on samples collected Wednesday showed little or no asbestos in dust at the site or in air downwind of the attack, an EPA official said.

. . .

"It's very, very important to put this into perspective," said Bonnie Bellows, an EPA spokeswoman. "We expect to find some asbestos in a building of this generation."

. . .

[ABC News-Fouled Air? Health Officials Stress Caution, but Say Measured Levels Safe, 9/13/01, www.abcnews.go.com/sections/living/DailyNews/wtc_healthhazards010911.html]

9/13/01

Strewn across Lower Manhattan, in shards and twisted piles and layers of ash, there is enough concrete to build a five-foot-wide sidewalk from New York City to Washington, D.C., enough steel to erect more than 20 Eiffel Towers, and the remnants of nearly 14 acres of glass.

. . .

The E.P.A.'s administrator, Christie Whitman, said in a telephone interview from Washington that some chemicals that were of theoretical concern in the hours after the collapse, especially lead, which was legally used in paint in the years of the building's construction, had not been detected in quantities high enough to raise alarm. And she 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. She said her agency would monitor the area continually during the coming months."

. . .

[Challenges and Dangers in Disposing of Two Fallen Giants, 9/13/01, NY Times]

9/13/01

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. Sampling of bulk materials and dust found generally low levels of asbestos.

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.

“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.

. . .

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

9/14/01

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. The new samples confirm previous reports that ambient air quality meets OSHA standards and consequently is not a cause for public concern. New OSHA

data also indicates that indoor air quality in downtown buildings will meet standards.

EPA has found variable asbestos levels in bulk debris and dust on the ground, but EPA continues to believe that there is no significant health risk to the general public in the coming days. Appropriate steps are being taken to clean up this dust and debris.

"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.. "Keeping the streets clean and being careful not to track dust into buildings will help protect workers from remaining debris."

Air Samples taken on Sept. 13 th inside buildings in New York's financial district were negative for asbestos. Debris samples collected outside buildings on cars and other surfaces contained small percentages of asbestos, ranging from 2.1 to 3.3 % slightly above the 1 percent trigger for defining asbestos material. *[emphasis added]*

. . .

EPA Administrator Christie Whitman: "In addition we will be moving six continuous air monitoring stations into the area. We will put five near ground zero and one on Canal Street. The good news continues to be that the air samples we have taken have all been at levels that cause us no concern."

. . .

[Headquarters Press Release, Washington, DC, For Release 09/14/2001, EPA, OSHA UPDATE ASBESTOS DATA, CONTINUE TO REASSURE PUBLIC ABOUT CONTAMINATION FEARS, www.epa.gov]

9/14/01

The persistent pall of smoke wafting from the remains of the World Trade Center poses a very small, and steadily diminishing, risk to the public, environmental officials and doctors said yesterday.

There could be a slight health threat, they said, to city residents with weakened immune systems, heart disease or asthma, and to rescue workers who did not wear protective gear or who smoke. Smoking greatly amplifies the effects of some kinds of pollution, scientists said. But over all, the danger was no greater than that on a smoggy day, some officials said.

Some samples of the dust that cloaked the disaster scene, victims and rescuers on Tuesday showed slightly elevated levels of lead and asbestos, the agency said. But by Wednesday, levels of the substances had dropped below the threshold of any concern, said Bonnie Bellow, a spokeswoman for the Environmental Protection Agency. Tests on samples taken yesterday would not be completed until today, she said.

Continued monitoring of fine soot particles and other kinds of air contaminants by state environmental officials also showed "nothing out of the ordinary," a state official said.

. . .

[THE CHEMICALS, Monitors Say Health Risk From Smoke Is Very Small, By ANDREW C. REVKIN, 9/14/01, NY Times]

9/14/01

The smoky, acrid odors emanating from the plume above ground zero became another manifestation of the surreal tragedy, a tangible presence that wafted into the city's consciousness and hung omnipresent.

Tests in parts of Brooklyn and Staten Island, which until late Wednesday's wind shift were downwind from the blast site, suggest that the plume is not hazardous except in a small area immediately around the disaster, said Bonnie Bellow, a spokeswoman for the U.S. Environmental Protection Agency. She said levels of asbestos, lead, and volatile chemicals were all at low levels, negligible or nondetectable.

"That is not to say that odors, like dust, aren't irritating to people with respiratory problems and asthma," Bellow said. "People should take precautions if there's a lot of dust in the air."

People did just that. Angela Martin, an asthmatic from Forest Hills, said she had decided not to return to work in the downtown area for a few weeks. "I, for one, am spending a lot more time indoors," she said.

The Board of Education closed three schools north of Canal Street after tests showed "questionable" air quality, spokesman Kevin Ortiz said.

. . .

In lower Manhattan, the few pedestrians who walked the streets wore facemasks, purchased at hardware stores and pharmacies. Traces of devastation - soot, smoke, dust - mingled in the salty air of the South Street Seaport.

Holder, the former Army officer, manages a nearby parking garage. Few cars were parked there yesterday, and those that were remained covered in gray powder. "Protection is better," Holder said about the use of facemasks. "You never know what it is."

. . .

[Acrid Smell in Air Reminder of City's Loss. By Errol A. Cockfield, Jr, 9/14/01, Newsday, www.nynewsday.com/templates/misc/printstory.jsp?slug=ny%2Dnysmell142365628sep14&section=%2F]

9/14/01

EPA administrator Christine Todd Whitman, who maintains that the risks are negligible

. . .

Of the 24 dust samples the agency took in the first two days of the chaos, many contained asbestos, but only one registered levels above acceptable maximums, says EPA spokesperson Tina Kreisher. That sample, taken from very near the epicenter of the disaster in Manhattan’s financial district, contained 4.5 percent asbestos fibers. It was taken as agents fled the collapsing buildings on Tuesday. Dust samples from Thursday, she says, also showed elevated levels of 2.1 percent to 3.3 percent. A level of 1 percent or less is considered safe.

. . .

In addition, the agency has taken numerous air samples, all of which were in safe ranges, says Whitman, the former governor of New Jersey. “The way the plume has

gone and the way it has dissipated, it is not a health problem," she says. "We have found particulate matter in the air, but other than being an irritant to those people who are out there breathing it deeply that's why people are wearing protective gear and masks it is not a problem for the general population."

Given these assurances, officials have said they are considering reopening the New York Stock Exchange on Monday, though it is just a few blocks from the Twin Towers.
. . .
[Asbestos Alert. How much of the chemical does the World Trade Center wreckage contain? By David France and Erika Check, 9/14/01, NEWSWEEK WEB EXCLUSIVE, http://msnbc.com/news/629268.asp?0sp=w12b2&cp1=1]

9/14/01
"The President has said, 'Spare no expense, do everything you need to do to make sure the people of this city and down in Washington are safe as far as the environment is concerned,' " Whitman said.

The dangerous toxins have dissipated to low, nonthreatening levels, she said, but probably will rise again briefly as workers move more debris. But the air is not hazardous except for people with respiratory conditions.
. . .
[EPA CHIEF SAYS WATER, AIR ARE SAFE , New York Daily News; 9/14/01; SUSAN FERRARO]

9/15/01
In lower Manhattan, the U.S. Environmental Protection Agency, tapping emergency cleanup funds under the federal Superfund program, has launched an elaborate air testing program that includes six new monitoring stations and a high-tech portable unit that will be parked close to the blast site. Dust samples taken at the site have shown relatively high levels of asbestos, a carcinogen.

EPA spokeswoman Bonnie Bellow said Friday that air tests Thursday in two federal buildings in lower Manhattan - 290 Broadway and 26 Federal Plaza - did find airborne asbestos, but that none of the samples exceeded one-tenth of the maximum level allowed in workplaces by the Occupational Safety and Health Administration.

"There's nothing at this point that indicates that business can't resume" in the Wall Street area on Monday as scheduled, she added.
. . .
[Tests: Dust Not a Danger Here, Dan Fagin, 9/15/01, Newsday, /www.nynewsday.com/templates/misc/printstory.jsp?slug=ny%2Dlidust152367598sep15 &section=%2F]

9/16/01

Hundreds of asbestos cleanup workers representing more than a dozen local unions and several contractors continued the massive and delicate task of removing the contaminant yesterday from buildings damaged by the collapse of the World Trade Center.

.

In the meantime, Christine Todd Whitman, head of the U.S. Environmental Protection Agency, said yesterday that "there is no reason for concern," saying that the latest measurements of debris and air at ground zero and in areas tested in the financial district show the amount of asbestos is at or below background levels, which she defined as 1 percent or less of the total sample.

While there is no doubt the debris from the collapse contains asbestos and that some was released into the atmosphere, Whitman said the situation is better than she had hoped.

. . .

[TERRORIST ATTACKS /Asbestos Targeted In Cleanup Effort, EPA's Whitman: 'No reason for concern', by Hugo Kugiya, Newsday, 9/16/01, http://www.newsday.com/news/printedition/newyork/ny-2368899sep16.story]

9/17/01

Air quality in the city remains safe despite the smoke still rising from the World Trade Center rubble, officials insisted yesterday, even as asbestos removal teams combed lower Manhattan streets.

"We have found no levels of asbestos or any pollutants that raise concern," said Geoffrey Ryan, a spokesman for the city Department of Environmental Protection. Ryan said DEP employees continue to take daily air samples around the city, while the state Department of Environmental Conservation collects data from 25 fixed monitoring stations. All have shown pollutants to be within safe levels, he said . . .

. . .

[AIR SAFE TO BREATHE, DEP SAYS, New York Daily News, 9/17/01, SUSAN FERRARO AND CLEM RICHARDSON]

9/18/01

EPA Administrator Christie Whitman announced today that results from the Agency's air and drinking water monitoring near the World Trade Center and Pentagon disaster sites indicate that these vital resources are safe.

. . .

"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. "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.

. . .

EPA has conducted repeated monitoring of ambient air at the site of the World Trade

Center and in the general Wall Street district of Manhattan, as well as in Brooklyn. The Agency is planning to perform air monitoring in the surrounding New York metropolitan area. EPA has established 10 continuous (stationary) air monitoring stations near the WTC site. 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, www.epa.gov]

9/18/01

"Low levels of asbestos were detected in some dust and debris close to the wreckage of the World Trade Center, the officials said, but there was no evidence of danger, except to search crews moving the rubble. . . . Tina Kreisher, a spokeswoman for the E.P.A., said that ample gear was available at the attack site but that because of the heat and stress, workers commonly refused it. 'There are small pockets of asbestos,' Ms. Kreisher said. 'The concern is there, not for the city, not for residents, but definitely for these workers.'

. . .

[Dust Is a Problem, but the Risk Seems Small, 9/18/01, NY Times]

9/19/01

There were initial fears that a toxic cloud of asbestos fibers had been released when the buildings collapsed, but air and dust sampling by the Environmental Protection Agency (EPA) and the Labor Department's Occupational Safety and Health Administration since Sep. 13 has revealed either no asbestos in the air, or relatively low levels -- from 2.1 to 3.3 percent, compared to a one-percent threshold.

. . .

[Unknown Health Dangers Presented by 'Toxic Stew', INTERPRESS SERVICE, 9/19/01]

9/21/01

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 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. More recently, we’ve also tested drinking water supplies and found no sign of asbestos bacterial contamination, PCBs or pesticides,” she continued.

. . .
To date the Agency has taken 97 air samples from 11 separate fixed monitoring sites in and around the “hot zone” and elsewhere in lower Manhattan, and four fixed monitoring sites located in New Jersey downwind from the blast. Only seven samples taken at or near ground zero have had marginally higher levels of asbestos that exceed EPA”s level of concern for longterm exposure.
. . .
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.
. . .
Whitman detailed dust sampling undertaken thus far at the World Trade Center site, and confirmed that EPA has done a total of 101 dust samples, of which 37 were slightly over the one percent asbestos (the amount above which material is considered asbestos-containing).
. . .
[EPA press release, 9/21/01, www.epa.gov]

10/03/01
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.
. . .
EPA and 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. They have found no evidence of any significant public health hazard to residents or visitors to the New York metropolitan area.
. . .
"EPA's web site 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 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 . . .
. . .
[OSHA] Administrator Henshaw said. "It is important for workers involved in the recovery and clean-up to wear protective equipment as potential hazards and conditions are constantly changing at the site; however, our samples indicate there is no evidence of significant levels of airborne asbestos or other contaminants beyond the disaster site itself."
. . .
[EPA press release, 10/3/01]

10/11/01
[EPA spokeswoman] Bellow said none of the agency's tests for the presence of

asbestos, radiation, mercury and other metals, pesticides, PCBs or bacteria have shown any evidence of any significant public health hazard.

. . .

[POL'S LEERY OF WTC AIR QUALITY, 10/11/01, New York Daily News, MARTIN MBUGUA]

10/19/01

But on Sept. 11, as with so many things, the EPA's world changed. Faced with a public health scare that could have sent thousands in Manhattan fleeing the city or jamming hospitals, the EPA decided to cough up the truth about asbestos. Its officials bent over backward to get out the message that asbestos was harmful only if breathed at high levels and over sustained periods of time. When reporters pointed out that some of the tests had exceeded the EPA's safety levels, the agency hurried to explain that this was a "stringent standard based on long-term exposure" and repeated that the public was not at any real risk.

. . .

For all these reasons, it made sense for EPA head Christie Whitman to offer her soothing words about downtown. By about three weeks after the collapse, the EPA had taken 442 air samples, only 27 of which showed levels of asbestos above its most stringent standards. Many readings were taken in the immediate WTC site, and samples outside that area were even lower. The main risks, if any, are posed to the emergency workers, although they have been warned to wear protective masks. It is a shame that the truth has emerged only in the course of a catastrophe, and that the EPA had to expend so much energy calming a public that should have known the facts long ago.

. . .

[The EPA Comes Clean on Asbestos, Federal officials stop chasing a phantom risk, Wall St. Journal, . BY KIMBERLEY A. STRASSEL, 10/19/01]

10/26/01

The documents obtained by The News detail the presence of many hazardous substances many of them odorless in levels above or approaching EPA or OSHA safety standards.

"Yes, they are high," said EPA spokeswoman Mary Mears, when asked to comment on the|hazardous-substance readings contained in her agency's documents. "But you get a little distance from the plume and they go dramatically down."

When questioned, though, Mears conceded that shifting winds sometimes blow the plume directly at workers at the site.

. . .

[A Toxic Nightmare At Disaster Site Air, water, soil contaminated, by Juan Gonzales, NY Daily News, 10/26/01]

10/26/01

Air quality in Lower Manhattan has gradually improved since the early days after the

World Trade Center disaster last month, when a gritty, acrid residue of combustion and dust hung over parts of the city like a shroud. But at certain times, under certain conditions usually for brief periods the bad air still returns.

Most health experts are not terribly alarmed about the effect of these episodes on a generally healthy population. Although many people remain concerned about the smells and dust that can make eyes and throats burn, and anxious that conflicting information has left them at risk, health experts say that because the spikes do not last long and often occur in the middle of the night when few residents or office workers are on the streets, most people need not worry.

. . .

Officials at the Federal Environmental Protection Agency say the issues of particulate pollution and Lower Manhattan weather patterns are not that simple. They say that federal health standards for fine particulates have never been exceeded at any of the agency's monitors for any period averaged over 24 hours since Sept. 11, and that no health standards have been established for short-term surges because the harmful health effects of short exposures have not been proven.

. . .

The chief of the E.P.A.'s Air Programs Branch in New York, Raymond Werner, said that pollution generated at ground level is not the only thing that can account for elevated particulate counts. Some increases have also occurred during the recent warm days, he said, when sunlight has reacted photochemically with gases in the atmosphere to produce more particles.

. . .

[Safety Questions Remain About Air at Ground Zero, By KIRK JOHNSON, New York Times, 10/26/01]

10/26/01

William J. Muszynski, of the U.S. Department of Environmental Protection, said site workers "need to take precautions for themselves," but "citizens, especially citizens who are healthy, are safe."

. . .

[Officials: 'Ground Zero' Workers Safe, (no author listed), Newsday, 10/26/01]

10/27/01

Federal and city officials assured New Yorkers yesterday that the sometimes acrid smell emanating from the rubble of the World Trade Center does not pose a health risk for most people.

. . .

Testing at 19 monitoring stations to detect the presence of dangerous chemicals in and around the site "indicates people are safe," said William Muszynski, deputy regional administrator for the U.S. Environmental Protection Agency.

. . .

But he added: "Most of the recent days over the past couple of weeks, and even before that in some cases . . . the air data off the site was without significant risk.

. . .

[City, Feds Say WTC Air's OK Rule out risk to health, By MICHAEL R. BLOOD, NY

Daily News, 10/27/01]

10/27/01

Environment specialists told New York workers and residents last week that early studies of asbestos and lead levels in the dust at the site of the collapsed World Trade Center showed that they were below danger levels.

. . .

Dr George Thurston, professor of environmental medicine at New York University, said that so far levels of asbestos and lead were below the levels of concern set by the US Environmental Protection Agency.

. . .

[British Medical Journal, Vol. 323, p. 956, 10/27/01, News extra Early research says dust at World Trade Center site not dangerous, By Janice Hopkins Tanne, http://bmj.com/cgi/content/full/323/7319/956/a]

10/30/01

"We continue to closely monitor air quality and other environmental conditions in and around ground zero," said William J. Muszynski, EPA Acting Regional Administrator. "While we have fortunately not found levels of contaminants that pose a significant health risk to the general public, our efforts to monitor the area and keep the public informed of our findings have not waned. We welcome all concerned members of the public to our lower Manhattan offices to review the information we've gathered and to visit our Web site."

. . .

[EPA Region 2 press release, 10/30/01, www.epa.gov]

10/28/01

NEW YORK, Oct. 28 (UPI) -- Seven weeks after the terrorist attacks on the World Trade Center about 400,000 tons of rubble and steel have been removed, but the site still smolders and there is some concern about the dioxins, PCBs, benzene, sulfur dioxide and lead emitted at the 16-acre site.

. . .

However, New York Mayor Rudolph Giuliani said the air quality near Ground Zero "is safe." "I'm no expert on it. So I have to rely on the EPA and the state agencies and the city agencies and the private monitoring," the mayor said. "And all of that says the problems that this created are not dramatic. They're not health-threatening."

"You smell it and you feel there must be something wrong, but what I'm told is it's not dangerous to your health," he added. However, the EPA stressed that while the levels may be high directly at the site, "when you get a little distance," EPA spokeswoman Mary Mears said, "they go dramatically down."

. . .

[WTC's toxic exposure a worry, By Alex Cukan UNITED PRESS INTERNATIONAL, 10/28/0, http://www.upi.com/view.cfm?StoryID=28102001-030950-8046r]

11/1/01

[T]he vast majority of our tests find levels of these contaminants that pose no significant long-term health risks to residents, business employees and visitors beyond ground zero. And despite recent press accounts which suggest otherwise, these findings have not changed.

. . .

The Daily News focused on a small number of sampling results with the highest contaminant readings. The paper failed to report, however, that EPA has taken thousands of samples that do not exceed federal standards or guidelines. In addition, the sampling results highlighted in the article are snapshots of the levels of certain chemicals associated with burning such as benzene, dioxin and sulfur dioxide at a moment in time. They were taken right on the debris pile, at ground level. Some were even taken using probes placed into the pile. EPA and Occupational Safety and Health Administration standards are set many times below the level at which you would expect health impacts. Our results tell us that these chemicals are present at ground zero at levels that sometimes exceed a federal standard.

. . .

People living and working in the area should take comfort in the fact that EPA air samples of pollutants such as benzene, dioxin and sulfur dioxide taken at the perimeter of the work site are either very low or non-detectable.

. . .

[Testimony of Kathleen Callahan, Acting Deputy Regional Administrator U.S. Environmental Protection Agency, Before the New York City Council Environmental Protection Committee, November 1, 200, http://www.epa.gov/region02/news/speeches/011101k.htm]

11/2/01

A battery of government experts testified yesterday that environmental conditions around the destroyed World Trade Center pose no long-term health risks.

. . .

"The vast majority of our tests find levels of these contaminants pose no significant long-term health risks to residents, business employees and visitors beyond Ground Zero," testified Kathleen Callahan, deputy regional director of the U.S. Environmental Protection Agency. While some readings at the WTC site sometimes exceeded federal regulations, they were "snapshots of the levels of certain chemicals associated with burning," and changed with the weather and other conditions, Callahan said.

She added that the standards of the EPA and the Occupational Safety and Health Administration "are set many times below the level at which you would expect health impacts." Callahan also said that workers at the site are adequately protected if they wear respirators.

. . .

[Pros: Safe to Breathe Near WTC, By FRANK LOMBARDI, NY Daily News, 11/2/01]

11/4/01

"We've found that, by and large, the air in Lower Manhattan is safe to breathe," said Nina Habib, an Environmental Protection Agency spokeswoman.

. . .

[Ailments blamed on ground zero's toxic brew, Shelley Emling, Atlanta Journal Constitution, 11/4/0]

11/4/01

"The further you get from the site, the data does not demonstrate significant risks to people," said William J. Muszynski, acting regional administrator of the Environmental Protection Agency.

. . .

[Officials downplay risks of pollution near Ground Zero From Brian Palmer, CNN, 11/4/01, http://www.cnn.com/2001/US/11/04/rec.environmental.concerns/index.html]

11/9/01

Some testified that the level of asbestos is more prevalent and harmful than what the EPA told the committee last week. David Newman, of the New York Committee for Occupational Safety and Health, said the EPA's view that asbestos levels were not high enough to pose long-term health risks left him concerned. "While diseases such as asbestosis result from exposure to asbestos over long periods of time, asbestos-related cancers, such as mesothelioma, which have a 10- to 40-year latency period, can develop from low-level exposure to this killing dust," Newman said.

EPA spokeswoman Mary Mears disagreed. "Given the levels of asbestos we don't think there is any kind of significant health risk for people working or living near the site," she said. "But there could be some risk to the workers who are actually on the site where the levels tend to be the highest."

. . .

[Cleanup Worries: Residents, doctors see WTC health risks, By Bryan Virasami NEWSDAY, 11/9/01, http://www.newsday.com/news/health/ny-nyenv092455924nov09.story]

11/26/01

We've tested for the presence of pollutants such as asbestos, fine particulate matter, lead, volatile organic compounds, dioxin, benzene, metals, PCBs and other chemicals and substances that could pose a threat to the public and workers at the site. Fortunately, the vast majority of our tests find levels of these contaminants that pose no significant long-term health risks to residents, business employees and visitors beyond ground zero. And despite recent press accounts which suggest otherwise, these findings have not changed. In fact, environmental conditions off the site have improved in recent weeks.

. . .

EPA and Occupational Safety and Health Administration standards are set many times below the level at which you would expect health impacts.

. . .
Now I'd like to turn to some of our other findings. We have found asbestos in some of our air and dust samples at ground zero and the surrounding area. Some of the dust samples show levels above the one percent used to indicate that a material is asbestos-containing. To date, out of more than 2,000 air samples taken at about 20 fixed air monitoring stations in and around the site, only about 30 have had levels of asbestos that exceed the Asbestos Hazard Emergency Response Act of AHERA standard, we use to determine if children can re-enter a school building after asbestos has been removed or abated. It is a stringent and protective standard. With one exception on October 9, the last time we recorded a level above the school re-entry standard was September 30.
. . .
As you know, individual groups and organizations, including the Ground Zero Elected Official Task Force, have undertaken their own studies of environmental conditions in and around the World Trade Center site. Reports summarizing these studies, such as the October 12 report prepared for the Task Force, show results that are fundamentally consistent with EPA's findings. Furthermore, the recommendations offered to the public as a result of these independent studies are also consistent with those of EPA.
. . .
[Testimony of Kathleen Callahan, Acting Deputy Regional Administrator U.S. Environmental Protection Agency, Before the New York State Assembly, 11/26/01]

1/8/02
EPA officials offer conflicting advice at this point. They say the apartments and office towers around ground zero are safe but t hey advise landlords to seek professional asbestos cleaners. And they've advised all workers on the site to wear respirators.

"There is nothing we have found that is at a significant level," said Bellow of the EPA, "that would say you should not come here to live or work."
. . .
[In New York, Taking a Breath of Fear, by Christine Houghney, Washington Post, 1/8/02]

1/10/02
Nina Habib, an EPA spokeswoman, said the EPA's own asbestos tests -- numbering in the thousands -- have been outdoors, not indoors. And only a handful have shown concentrations above acceptable levels. "That's indicative of what's in people's apartments as well," she said. "
. . .
[Ground Zero asbestos like Libby's EPA chemist says New York dust as toxic as that in Montana, 1/10/02, Susan Drumheller, Idaho Spokesman, www.spokesmanreview.com]

2/7/02
"Based on our findings, and now really more than 10,000 samples of a wide range of substances, we have found no significant long-term risk posed by the outdoor air," EPA spokeswoman Bonnie Bellow said last week.
. . .
[U.S.A. Today, 2/7/02]

2/11/02

In addition to the monitoring conducted by our federal, state and city partners, we have tested for the presence of pollutants such as asbestos, fine particulate matter, lead and other metals, volatile organic compounds, dioxin, PCBs and other substances that could pose a threat to the public and workers at the site. These samples are taken from more than 20 fixed monitoring stations at and around ground zero and an existing New York State air quality monitoring network that was augmented for the World Trade Center response.

The Agency also uses portable sampling equipment to collect data from a range of locations in lower Manhattan. Fortunately, the vast majority of our tests continue to find levels of these contaminants below standards or guidelines set to protect public health. We have also found that environmental conditions on and off the site have improved considerably over time. While this news may be reassuring to the general public, it is important to emphasize as we have from day one that the risks are dif ferent for response workers at the World Trade Center site; they have been working long hours in dusty and what were very smokey conditions.

. . .

[TESTIMONY OF JANE M. KENNY REGIONAL ADMINISTRATOR EPA, BEFORE THE U.S. SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS SUBCOMMITTEE ON CLEAN AIR, WETLANDS, AND CLIMATE 2/11/02, http://www.epa.gov/ocir/hearings/testimony/2002_0211_jmk.pdf]

2/12/02

Fortunately, the results of our testing of outdoor environmental conditions to date have consistently indicated that air quality in Lower Manhattan does not pose a long-term risk to those who live, work, or visit there.

. . .

[letter from Administrator Whitman to Senator Clinton, 2/12/02]

5/8/02

The U.S. Environmental Protection Agency (EPA) and its federal, state and city partners today announced a comprehensive plan to ensure that apartments impacted by the collapse of the World Trade Center have been properly cleaned. . . . this unprecedented effort to provide assurances that people are not being exposed to pollutants related to the World Trade Center collapse at levels that might pose long-term health risks.

. . .

“We understand the concerns of Lower Manhattan residents and we know that they are looking to us for reassurance,” said Jane M. Kenny, EPA Regional Administrator. “While we cannot undo the events of September 11, we can provide the assurance that people's homes have been cleaned properly. While the scientific data about any immediate health risks from indoor air is reassuring, people should not have to live with uncertainty about their futures.”

“As New Yorkers rebound from 9/11, Mayor Bloomberg is committed to ensuring that the

health and safety of residents and workers is of the highest priority," said Christopher Ward, DEP Commissioner. "While earlier air testing in Downtown Manhattan reassured New Yorkers, this comprehensive, collaborative program will allow residents to have their apartments cleaned and tested free of charge if there is any concern with indoor air quality. New Yorkers deserve to know that their environment is safe from health risks."
. . .
]EPA AND CITY OUTLINE COMPREHENSIVE PLAN TO ADDRESS THE CONCERNS OF LOWER MANHATTAN RESIDENTS ABOUT THE IMPACTS OF THE WORLD TRADE CENTER COLLAPSE ON INDOOR AIR QUALITY, 5/8/02, http://www.epa.gov/region02/news/2002/02038.htm]

5/8/02
"This is to assuage concerns from residents in Lower Manhattan who continue to have concerns over air in their apartments," said Mary Mears, spokeswoman for Region II of the EPA.
. . .
[EPA to Clean WTC Apartments, 5/8/02, By Alex Cukan, United Press International]

5/9/02
Bowing to angry tenants and homeowners near Ground Zero, the Environmental Protection Agency said yesterday it would test and clean apartments potentially tainted with asbestos from the destruction of the World Trade Center.
. . .
Despite the about-face, the EPA and city environmental officials maintained yesterday that no health emergency exists. They said the sweeping new program is being carried out largely to ease fears of those who live near Ground Zero.
. . .
"While the scientific data about any immediate health risks from indoor air is very reassuring, people should not have to live with uncertainty about their futures," said Jane Kenny, EPA regional administrator. "There is no emergency here."
. . .
[EPA Vows Housing Cleanup, 5/9/02, By GREG GITTRICH, NY Daily News]

5/15/02
EPA officials say the remaining dust poses little health risk. . . . EPA officials say the program is designed mainly to reassure jittery residents that their homes are safe.

"What the scientists have been telling us is, 'Very low risk, even over a long period of time,'" EPA regional administrator Jane Kenny said. "Really what we're trying to do is to make people in lower Manhattan feel that they're living in a good place and that they're safe in their homes."
. . .
[EPA Rapped for NYC Cleaning Program, 5/15/02, By Michael Weissenstein, Associated Press]

5/31/02
[EPA press release]
The fires have been out for months, recovery activities are almost completed, the barge operation is shut down and our sampling generally shows that air quality in lower Manhattan is back to normal levels prior to September 11. EPA is now focused on providing local residents the assurance that their homes have been cleaned properly.
. . .
Since September, the Agency has monitored daily for substances such as volatile organic compounds (VOCs), dioxin, polyaromatic hydrocarbons (PAHs) and metals that would have been associated with the fires that had burned for months after the World Trade Center collapse. These readings were first taken in the smoke plumes and later in the recovery pits and at a number of stations ringing the Ground Zero site. Early on, EPA found elevated levels of some substances in the smoke itself, but these levels tailed off dramatically even a few feet from the source of the smoke. Since January, the pollutants have been at either extremely low levels well below EPA's benchmarks or at levels not detectable.
. . .
Analysis of the majority of samples from monitoring sites at or around Ground Zero has not shown detectable levels of asbestos or has found levels well below the standard that EPA is applying one that is normal ly used to determine whether children may re-enter a school building after asbestos has been removed or abated. No lower Manhattan samples have been above this level since April 2, when a sample taken from the worker wash tent at which workers remove dust from their boots and clothing slightly exceeded the standard. Since September 11, only 21 out of nearly 9500 samples taken have exceeded the school-based standard.
. . .
[EPA SHIFTS FOCUS TO INDOOR AIR, 5/31/02, http://www.epa.gov/region02/news/2002/02052.htm]

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undated, 2002
WHAT DID WE FIND?

At Ground Zero levels of particles, benzene, asbestos are elevated and are a potential health threat to workers.
. . .
Elsewhere - although short-term irritant health effects may persist as long as smoke and dust are present near the site, levels of contaminants in the air and dust in the neighborhoods near the site are not high enough to cause long term health effects.
. . .
[http://www.epa.gov/airnow/presentations2002/werner.pdf]

6/3/02
Starting today, lower Manhattan residents can request cleaning and/or testing of their homes from the U.S. Environmental Protection Agency (EPA) by logging on to the Agency's World Trade Center Web page at www.epa.gov/wtc or by calling the EPA

hotline at 1-877-796-5471. The launch of the hotline and Web site marks the startup of the comprehensive multi-agency program that was announced in May to ensure that apartments impacted by the collapse of the World Trade Center have been properly cleaned. EPA and its federal, state and city partners are collaborating in this unprecedented effort to provide assurances that people are not being exposed to pollutants related to the World Trade Center collapse at levels that might pose long term health risks.

. . .

"I encourage residents of lower Manhattan to take advantage of our cleaning and testing program," said Jane Kenny, EPA Regional Administrator. "The program will provide downtown residents with a measure of confidence that their homes have been properly cleaned."

. . .

[EPA LAUNCHES LOWER MANHATTAN CLEANING HOTLINE, 6/3/02, http://www.epa.gov/region02/news/2002/02053.htm]

12/20/02

The December 28th deadline for lower Manhattan residents to sign up for EPA's cleaning and testing program is drawing near . . .

"Our cleanup program is designed to reassure residents that they have reduced the risk from exposure to dust left over from the collapse of the World Trade Center," said Jane Kenny, EPA Regional Administrator. "Now is the time to call the hotline to sign up."

. . .

[EPA Region 2, DEADLINE TO SIGN UP FOR EPA LOWER MANHATTAN CLEANING AND TESTING PROGRAM DRAWS NEAR, 12/20/02, http://www.epa.gov/region02/news/2002/02134a.htm]

"Health standards are overly protective" – EPA and NYC DOH disown standards

Not only does EPA and NYC claim that its air tests were below all health standards for long term health effects, but they also claim that their own health standards are overly protective. This implies that EPA believed that even when levels of toxic contaminants from WTC fallout exceed standards, citizens should not worry:

11/1/01

EPA and Occupational Safety and Health Administration standards are set many times below the level at which you would expect health impacts. Our results tell us that these chemicals are present at ground zero at levels that sometimes exceed a federal standard.

. . .

[Testimony of Kathleen Callahan, Acting Deputy Regional Administrator U.S. Environmental Protection Agency, Before the New York City Council Environmental Protection Committee, November 1, 200, http://www.epa.gov/region02/news/speeches/011101k.htm]

11/1/01

The standards or tolerance levels that are being used are very conservative. For example, for asbestos, we are using the standard that is used for indoor air quality for reentry into a school after asbestos removal, which is the most stringent standard, as the tolerance level or standard for outdoor air quality in the residential areas. This is also true for other substances, such as dioxins, identified at the perimeter of the site. . . . Moreover, these standards have been designed to include many safety factors so that acceptable levels of exposure are far below the levels at which health effects are expected to occur.

. . .

[Jessica Leighton, Ph.D., Assistant Commissioner, Environmental Risk Assessment, NYC DOH, Before the NYC Committee on Environmental Protection, 11/1/01]

11/2/01

She added that the standards of the EPA and the Occupational Safety and Health Administration "are set many times below the level at which you would expect health impacts." Callahan also said that workers at the site are adequately protected if they wear respirators.

. . .

[Pros: Safe to Breathe Near WTC, By FRANK LOMBARDI, NY Daily News, 11/2/01]

11/26/01

EPA and Occupational Safety and Health Administration standards are set many times below the level at which you would expect health impacts.

. . .

[Testimony of Kathleen Callahan, Acting Deputy Regional Administrator U.S. Environmental Protection Agency, Before the New York State Assembly, 11/26/01]

C: SIMULTANEOUS CLAIMS BY NYC OFFICIALS – "NO HAZARDS"

The following are the statements of NYC Mayor Giuliani, the NYC Department of Health (NYC DOH), and the NYC Department of Environmental Protection (NYC DEP), along with the press coverage of their statements. Along with EPA, they also claimed that there were no hazards from indoor air as well as outdoor, and no long or short term hazards. NYC officials actually appear to precede EPA in making these claims.

NYC officials made first statements regarding safety

Research indicates that Mayor Giuliani came before EPA Administrator Whitman in making claims about the safety of the air in NYC. Mayor Giuliani and the NYC Department of Health Commissioner made public statements on 9/12/01, which were in the papers on 9/13/01.

EPA issued its first press release on the WTC on 9/13/01, which was in the print press on 9/14/01. On 9/13/01, Whitman traveled to NYC and made a speech at 5:30 PM to announce the results of testing, but not EPA testing. EPA administrator Whitman made a telephone interview with the NY Times on presumably 9/12/01, which was printed in the 9/13/01 edition. But this 9/12/01 NY Times interview was not as major a statement as the statements by Giuliani and the NYC Health Commissioner on 9/12/01.

EPA did not have any of its own air testing results until at least 9/15/01. The table below shows the first dates EPA had data for a range of specific toxic constituents. EPA only had very limited results from 4 to 6 dust samples it took on 9/11. See the following table.

DATES first tests taken by EPA	Air	Dust	Drinking or Surface Waters
asbestos	9/15 (only 5 samples)	9/11 (only 6 samples)	unknown
particulate matter	9/18 (only 7 samples)	never	never
PAH's	11/2	never	never
dioxins	9/16	never	9/14 (only 2 samples)
PCB's	9/16 (only 4 samples)	never	never
Volatile organic compounds	9/16	never	never
Benzene	9/16	never	9/15
Lead	9/16 (only 2 samples)	9/11 (only 4 samples)	9/14 (water)
Chromium	9/16 (only 2 samples)	9/11 (only 4 samples)	9/14 (water)

On the other hand, the NY State Dept. of Environmental Conservation had in-place particulate monitoring results from before and after 9/11, because particulate monitoring was always done, before and after 9/11.[1] OSHA had air monitoring samples starting from 9/13. 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.

The only tests for toxic materials from 9/11 were 6 dust samples taken by EPA, and 12 dust samples from Con Edison, the utility company.[2] Apparently, the only real data for EPA or NYC to use for their statements on 9/12/01 came from these dust samples. See Appendix 1 of this report for the results of EPA and Con Edison's dust samples on 9/11. Generally speaking, the levels of asbestos found by Con Edison in WTC dust were lower than that found by EPA in later days.

Con Edison has always had a major interest in asbestos because it supplies steam as a utility, just like electricity, to buildings in Manhattan. Their steam pipes are insulated with asbestos. Occasionally, steam pipes have exploded, resulting in asbestos releases. See the endnote describing the 1989 incident where a steam pipe exploded in Gramercy Park, NYC, and Con Edison was indicted on various charges including criminal conspiracy to conceal the release of asbestos. [3]

Compendium of statements by NYC officials on safety

9/13/01

Mayor Giuliani and Dr. Neal Cohen, the city's health commissioner, said yesterday the air quality is being monitored, but no cause for concern has been detected.

"The air is safe as far as we can tell, with respect to chemical and biological agents," Giuliani said.

Cohen added that city, state and federal environmental agencies are "looking at air asbestos" and that "at this point, we don't have any level of concern."

. . .

[SITE DUST CALLED HARMFUL, New York Daily News; 9/13/01, FRANK LOMBARDI]

9/13/01

U.S. Environmental Protection Agency spokeswoman [Bonnie Bellow] said Wednesday that EPA officials "really don't detect any real danger" in air and dust tests. And New York Mayor Rudolph Giuliani echoed the sentiments this morning.

"The Health Department has done tests and at this point it is not a concern," Giuliani said. "So far, all the tests we have done do not show undue amounts of asbestos or any

particular chemical agent that you have to be concerned about." Still, he said, people in lower Manhattan were feeling the effects of all the dust and debris spawned by the terrorist attack. "The accumulation of it, for people that are down there, can become very, very irritating," he added. "And there were a lot of people whose eyes have been burning, but I don't think there is any chemical agent we have to worry about at this point."

. . .

[ABC News, Fouled Air? Health Officials Stress Caution, But Say Measured Levels Safe, 9/13/01, abcnews.go.com/sections/living/DailyNews/wtc_healthhazards010911.html]

9/17/01

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. *[emphasis added]*

. . .

Because some asbestos was used in the building of the World Trade Center, City, State, and Federal agencies have been collecting dust, debris, and air samples since the World Trade Center collapse. As expected, some asbestos was found in a few of the dust and debris samples taken from the blast site and individuals working in this area have been advised to take precautions. However, most of the air samples taken have been below levels of concern. Based on the asbestos test results received thus far, there are no significant health risks to occupants in the affected area or to the general public.

In general, asbestos-related lung disease results only from intense asbestos exposure experienced over a period of many years, primarily as a consequence of occupational exposures. The risk of developing an asbestos-related illness following an exposure of short duration, even to high levels, is extremely low.

. . .

[NYC DOH, 9/17/01, http://www.ci.nyc.ny.us/html/doh/html/alerts/wtc3.html]

9/22/01

NYC HEALTH DEPARTMENT DISTRIBUTES HEALTH RECOMMENDATIONS FOR RESIDENTIAL AND COMMERCIAL REOCCUPATION

. . .

New York City Health Commissioner Neal L. Cohen, M.D., said "The Health Department is continuing to work with federal, state, and local agencies to assess the safety of neighborhoods affected by the collapse of the World Trade Center buildings. While there are no significant adverse health risks to the general public, residents and business owners who are allowed to return to their buildings should follow Health Department recommendations to minimize exposure to dust and other particulate matter that may cause throat and eye irritation

. . .

[NYC DOH, 9/22/01, press release,

http://www.ci.nyc.ny.us/html/doh/html/public/press01/pr84-922.html]

Because some asbestos was used in the building of the World Trade Center, City, State, and Federal agencies have been collecting dust, debris, and air samples since the World Trade Center collapse. As expected, some asbestos was found in a few of the dust and debris samples taken from the blast site and individuals working in this area have been advised to take precautions. However, most of the air samples taken have been below levels of concern. Based on the asbestos test results received thus far, there are no significant health risks to occupants in the affected area or to the general public.
. . .
[Currently posted on NYC DOH website, unknown original date, http://www.ci.nyc.ny.us/html/doh/html/alerts/wtc3.html]

What are the health effects if I am exposed to asbestos?

There are no known immediate effects at the time of exposure. Asbestos does not cause allergies, headache, burning eyes, sore throat or skin problems. In general, asbestos-related lung disease results only from intense asbestos exposure experienced over a period of many years, primarily as a consequence of occupational exposures. The risk of developing an asbestos-related illness following an exposure of short duration, even to high levels, is very low.
. . .
[NYC DOH fact sheet on asbestos currently posted at http://home.nyc.gov/html/doh/html/ei/eiasbest.html]

What are the health effects of asbestos?

Destruction of the World Trade Center buildings released large amounts of dust and ash, some of which contained trace amounts of asbestos. Based on the asbestos test results received thus far, the general public's risk for any short or long term adverse health affects are extremely low.
. . .
[NYC DOH, undated, New *York City Department of Health Responds to the World Trade Center Disaster, Public Health Advisory Concerning Air Quality in the Affected Area of the World Trade Center Disaster, http://www.nyc.gov/html/doh/html/alerts/wtc1.html]*

10/5/01

New York City Health Commissioner Neal L. Cohen, M.D., today informed New Yorkers that despite the smoky conditions in areas of lower Manhattan that are close to the World Trade Center site, test results from the ongoing monitoring of airborne contaminants indicate that the levels continue to be below the level of concern to public health. Nonetheless, while debris continues to be disturbed, and while flare ups of smoke continue to permeate the downtown area, air testing results will continue to be

monitored, and appropriate health recommendations will be issued as necessary.

Dr. Cohen added, "As work continues at the disaster site, the presence of dust and smoke odor in the downtown area has been of understandable concern to residents. However, air monitoring by Federal, State and City agencies has indicated that the levels of particulate matter being detected are below the level of public health concern and do not pose long-term health risks to the general public.

Some individuals with underlying respiratory conditions, such as asthma, may experience exacerbation of symptoms, and other persons may also experience short-term discomfort including irritation of the eyes, nose, and throat."

[This press release does not even mention asbestos as a possible contributor to long term health effects.]

. . .

[Press Release, New York City Department of Health Office of Public Affairs, NYC HEALTH DEPARTMENT RESPONDS TO CONCERNS ABOUT AIR QUALITY IN LOWER MANHATTAN, 10/5/01, http://www.ci.nyc.ny.us/html/doh/html/public/press01/pr89-1005.html]

10/26/01

Joel A. Miele, senior commissioner of the city's Department of Environmental Protection, said they have been using monitoring standards for indoor environments, which are tougher than those for outdoor areas. "We have bent over backwards to be as conservative as possible in our testing ... and there is no significant danger" to anyone's health, he said.

Fires and wind at the big, open site can kick up smoke and an awful smell, and register different monitor readings at different times, Miele said. "People are safe, not just at the site, but at the perimeters," he added.

Dr. Neal Cohen, the City Health Commissioner, said people with health problems, especially respiratory issues, should take precautions. And although some citizens may experience irritation in their eyes, throat and nose, he insisted "we don't believe there will be long term health affects" from site emissions. Test results, he said, show an occasional uptick in some areas, but they soon return to normal levels.

"We do not see a consistent picture of problems except at 'the pile' where the workers are supposed to wear protective gear," Cohen added. The officials scoffed at a report in Friday's Daily News that said levels of poisonous chemicals and metals in the environment at and around 'ground zero' exceed federal levels.

. . .

[Officials: 'Ground Zero' Workers Safe, (no author listed), Newsday, 10/26/01]

10/27/01

Federal and city officials assured New Yorkers yesterday that the sometimes acrid smell emanating from the rubble of the World Trade Center does not pose a health risk for

most people.

Mayor Giuliani, whose office at City Hall is just a few blocks from the twin towers' charred, smoldering ruins, said extensive monitoring by government agencies found that "the problems this created are not dramatic, are not health-threatening." "I come down here in the morning and sometimes the odor is terrible," the mayor said. "You smell it and you feel there must be something wrong with it. But what I'm told is that it is not dangerous to your health."

. . .

Health officials said that although people in good health near the area generally face no realistic or significant danger, they warned people with asthma and other respiratory ailments to exercise caution.

. . .

"The short-term irritation of eyes, nose and throat that some people ... may feel does not translate into significant or any long-term health effects," said city Health Commissioner Neil Cohen. "The occasional uptick in elevated readings that are taken with some of these pollutants generally does return to acceptable levels very, very quickly. In the aggregate, we don't see any consistent picture that would affect anyone but the immediate rescue worker who is at The Pile," Cohen said.

[City, Feds Say WTC Air's OK Rule out risk to health, By MICHAEL R. BLOOD, NY Daily News, 10/27/01]

11/1/01

Asbestos was one of the substances of greatest concern since it was a known building component in the World Trade Center. However, except for a few transient increases found during the initial weeks, the levels of asbestos have been below levels that would cause health concern. Moreover, these levels are decreasing, and cannot be considered long-term exposures.

. . .

Although short-term irritant health effects may persist as long as smoke and dust are present near the site, levels of more hazardous contaminants in the air and dust in the nearby neighborhoods are not high enough or for long enough to cause long-term health effects.

. . .

[Jessica Leighton, Ph.D., Assistant Commissioner, Environmental Risk Assessment, NYC DOH, Before the NYC Committee on Environmental Protection, 11/1/01]

11/2/01

Environmental and health officials sought to assure a City Council committee yesterday that there were no indications of serious long-term health risks to workers or residents at or near ground zero, amid growing concerns to the contrary.

. . .

Robert Adams, the director of environmental health and safety services at the city's Department of Design and Construction, said that although workers at the site were still required to wear respirators and other protective gear, the data suggest that even an unprotected worker would not experience long-term health risks from the levels of

poisons that had been detected.

Jessica Leighton, an assistant commissioner at the city's Department of Health, said that while tests had recorded occasional spikes in the levels of various contaminants, including asbestos, at some locations at or near the site, long-term health risks are associated with consistent exposure over a 30-year period.
. . .
[Workers and Residents Are Safe, Officials Say, By DIANE CARDWELL, 11/2/01, New York Times]

11/8/01
Beyond the tragic loss of life and spirit at the site that once was the World Trade Center, lingering concerns continue to rise from the debris, specifically about what is in the air. At Stuyvesant High School, there is independent monitoring of the air quality, and parents have raised concerns about the levels of dust in the school.

City Health Commissioner Neil Cohen said Thursday that he would review the tests, but stressed that he knows of no health risk at the school. Neil Cohen, NYC Health Commissioner: "The air quality in that area has been well below the standards required for health and safety."
. . .
[Residents Say City Not Doing Enough To Assure Them About Health Concerns Near Ground Zero, 11/8/01, WABC News, http://abclocal.go.com/wabc/news/WABC_110801_enviroimpact.html]

11/8/01
Despite fires and a pungent odor at the wreckage of the World Trade Center, most tests for contaminants in New York's air have not triggered alarm, health officials say.

U.S. Environmental Protection Agency spokeswoman *[Bonnie Bellow]* said Wednesday that EPA officials "really don't detect any real danger" in air and dust tests. And New York Mayor Rudolph Giuliani echoed the sentiments this morning.

"The Health Department has done tests and at this point it is not a concern," Giuliani said. "So far, all the tests we have done do not show undue amounts of asbestos or any particular chemical agent that you have to be concerned about." Still, he said, people in lower Manhattan were feeling the effects of all the dust and debris spawned by the terrorist attack. "The accumulation of it, for people that are down there, can become very, very irritating," he added. "And there were a lot of people whose eyes have been burning, but I don't think there is any chemical agent we have to worry about at this point."
. . .
[ABC News, Fouled Air? Health Officials Stress Caution, But Say Measured Levels Safe, 9/13/01, http://abcnews.go.com/sections/living/DailyNews/wtc_healthhazards010911.html]

2/02

I live and/or work downtown. Do I need to be concerned about the air I'm breathing? For healthy people living and working in areas near the WTC site, it is believed that the contaminant levels in the environment do not pose serious long-term health risks. While exposure to smoke can cause eye, nose and throat irritation among healthy individuals, these symptoms are usually short-lived and are unlikely to lead to ongoing health problems. The fires at the site can also contribute to odors in the surrounding area. When odors are present, some people may experience short-term effects such as respiratory irritation, headaches and dizziness. These effects tend to lessen once exposure to the odors is stopped.

. . .

[New York City Department of Health & Mental Hygiene Responds to the World Trade Center Disaster ENVIRONMENTAL HEALTH QUESTIONS FOLLOWING THE WORLD TRADE CENTER DISASTER, 2/2002, http://www.nyc.gov/html/doh/html/ei/eiasbest.html

---

2/10/02

Some people living or working near Ground Zero may have faced serious health risks since Sept. 11, but environmental experts say they don't know enough to be certain about long-term harm.

. . .

"Every test that has been done says the air quality was in acceptable limits," Mayor Bloomberg said yesterday. "I think some people are just never going to want to believe that."

. . .

Despite EPA assurances, tests in November outside Stuyvesant High School found asbestos well above federal standards.

. . .

[WTC's Air of Uncertainty - Experts weigh health risks of twin towers fires & dust, 2/10/02, NY Daily News, By PAUL H.B. SHIN and RUSS BUETTNER]

2/11/02

Many individuals were exposed to large amounts of smoke, dust, and airborne substances. The potential release of contaminants during and after the collapse was a primary public health concern from the beginning, and air monitoring was established immediately, and still continues. The Health Department reviews the numerous air quality, debris sample, and personal air monitoring tests being conducted by various agencies. The data from air quality tests thus far have been, in general, reassuring. None of the testing done to date has shown results that would indicate long-term health impacts.

. . .

[New York City Department of Health Office of Public Affairs, Testimony Thomas R. Frieden, M.D., M.P.H. Commissioner New York City Department of Health and Joel A. Miele Sr., P.E. Commissioner New York City Department of Environmental Protection before the U. S. Senate Committee on Environment and Public Works Subcommittee on Clean Air, Wetlands, and Climate Change Monday, February 11, 2002, http://home.nyc.gov/html/doh/html/public/testi/testiair.html]

2/25/02

Literally before the dust had cleared, the administration of New York's then-Mayor Rudolph Giuliani assured a terrified city that the air was safe. On September 16, the city's health department issued a public statement declaring that "the general public's risk for any short or long term adverse health [effects is] extremely low." The same day, EPA Administrator Christie Todd Whitman volunteered her own bill of clean health: "There's no need for the general public to be concerned."

. . .

[Toxic haste, Staten Island Advance, Alyssa Katz, 2/25/02, http://www.americanprospect.com/print/V13/4/katz-a.html]

"Children and pregnant women not at greater risk" – false claim by NYC DOH

The NYC DOH claimed that pregnant women and young children did not need to take extra precautions when exposed to the air and fallout from the World Trade Center:

What are the health effects of asbestos?

Destruction of the World Trade Center buildings released large amounts of dust and ash, some of which contained trace amounts of asbestos. Based on the asbestos test results received thus far, the general public's risk for any short or long term adverse health affects are extremely low.

. . .

Do pregnant women and young children need to take additional precautions?

No. Pregnant women and young children do not need to take additional precautions.

. . .

[NYC DOH, undated, New York City Department of Health Responds to the World Trade Center Disaster, *Public Health Advisory Concerning Air Quality in the Affected Area of the World Trade Center Disaster, http://www.nyc.gov/html/doh/html/alerts/wtc1.html]*

The very statute which forced school systems to monitor, control, and test for asbestos states explicitly that children have an increased risk. This is because they live longer so that asbestos has more time to cause cancer.

Asbestos School Hazard Detection and Control Act

. . .

§ 3601. Congressional statement of findings and purposes (a) The Congress finds that-- (1) exposure to asbestos fibers has been identified over a long period of time and by reputable medical and scientific evidence as significantly increasing the incidence of cancer and other severe or fatal diseases, such as asbestosis; (2) medical evidence has suggested that children may be particularly vulnerable to environmentally induced cancers; (3) medical science has not established any minimum level of exposure to asbestos fibers which is considered to be safe to individuals exposed to the fibers;

[June 14, 1980, P.L. 96-270, § 1, 94 Stat. 487, 20 USCS § 3601 (2001). Available at http://www.findlaw.com/ or http://uscode.house.gov/]

In addition, there is at least one study showing that asbestos fibers can cross the placenta and reach the unborn child:

> Digests of lungs, liver, and placenta from five stillborn infants of 22 to 38 weeks gestational age were examined for asbestos and other fibers using light and electron microscopy, energy dispersive X-ray analysis, and selected area diffraction analysis. Uncoated chrysotile asbestos fibers were found in the digests of at least one of the three tissues examined from each stillborn infant. The asbestos fiber burdens ranged from 71,000 to 357,000 fibers/g wet tissue. Most of the fibers were small, with the mean length ranging from 0.83 to 2.53 microns. While appreciable numbers of uncoated chrysotile fibers were present, no coated asbestos fibers were found in any of the stillborns. Both coated and uncoated nonasbestos fibers were found in at least one of the tissue digests of all five stillborns. The uncoated nonasbestos fibers were characterized as aluminum silicates, diatomaceous earth fragments, or other fibers. The coated nonasbestos fibers or ferruginous bodies were consistent with being formed on diatomaceous earth fragments, black carbon cores, or sheet silicate cores. Since the placenta is the only route of communication between the fetus and the outside environment, our findings strongly suggest a transplacental transfer of asbestos and other fibers in humans.
> . . .
> *[Haque AK, Mancuso MG, Williams MG, Dodson RF, Asbestos in organs and placenta of five stillborn infants suggests transplacental transfer, Environ Res 1992 Aug;58(2):163-75]*

D: ADMISSIONS OF HEALTH RISKS BY EPA, NYC, AND FEMA

It is difficult to consistently claim that WTC fallout is not hazardous. There are many direct and implied admissions of hazard by EPA, NYC, and FEMA officials, in contrast to the denials compiled in Sections B and C. The following are those statements found that imply or directly state a hazard to residents and office workers.

The purpose of first documenting statements by EPA and other governmental authorities claiming that there were no hazards, and then contrasting them with their own admissions of a hazard is this: Such conflicting statements establish a willful and malevolent intent to deceive, and a failure to warn. The following sections of this report give additional instances where EPA and NYC officials deceived citizens about WTC fallout hazards.

EPA and NYC condemn WTC-contaminated cars, claim buildings never unsafe

There is a large disparity between what EPA and the NYC DOH determined for the safety of cars contaminated with WTC dust, and the safety of residences and offices contaminated by the same WTC dust. On one hand, EPA and the NYC DOH said that cars were condemned, because they could not be cleaned. On the other hand, EPA and the NYC DOH said that residences and offices were safe from the very beginning with the same WTC dust, and could be cleaned using the NYC DOH do-it-yourself cleanup guidelines.

The story of the condemned WTC cars is interesting, with several reversals and conflicting claims, explained below:

12/3/01 – Mayor and NYC Health Commissioner say WTC cars condemned

On 12/3/01, Mayor Giuliani and the NYC Health Commissioner Neal Cohen held a joint press conference, and said that vehicles that had been towed from near Ground Zero, covered with WTC dust, could not be returned because cleaning would be “too difficult” and even after cleaning, their safety would be “inconclusive.” This press conference was just a few days before the new mayor and a new health commissioner took office. As seen earlier in this report, up until this point, neither Giuliani nor Cohen ever admitted to any hazards to anyone other than rescue workers.

12/4/02

The city's health commissioner said yesterday that he was recommending that the city condemn the 900 cars that were towed from the World Trade Center site after the towers came down. Although the cars' owners have in some cases been calling for their return, the commissioner, Dr. Neal Cohen, said that because asbestos and other contaminants were prevalent throughout the cars' engines and bodies, it would be too expensive to clean them, and such a cleaning could be inconclusive, in terms of safety.

. . .

[Recommendation On Cars Towed On Sept. 11, 12/4/01, By Jennifer Steinhauer, NY Times]

12/27/01

"These vehicles are contaminated," Cohen said. "The cleanup of them is not practical, and I'll do whatever I can in my authority and recommend to the mayor that they be condemned."

. . .

[Drivers Want Their Cars Back, 12/27/01, CBS News, http://www.cbsnews.com/stories/2001/12/27/archive/main322479.shtml]

3/15/02

In December, New York's then-health commissioner Neal Cohen said the cars' engines and bodies were contaminated with dangerous World Trade Center debris and would not be returned.

. . .

[What To Do With An Auto Graveyard, At the last minute, the EPA prevents the return of cars damaged in the World Trade Center collapse, By Julie Scelfo, NEWSWEEK WEB EXCLUSIVE, 3/15/02, http://www.msnbc.com/news/724974.asp]

The statement that cars are unsafe with WTC dust, and that they cannot be decontaminated to assure safety, is a very important statement by a key official responsible for the WTC cleanup.

The important conclusion to draw is this: How is an automobile so very different from a washing machine, dishwasher, couch, HVAC system, carpet, computer, TV, bed, etc.?

NYC reverses itself after being sued by car owners

On 12/27/01, Mayor-elect Bloomberg appointed Thomas Frieden to be the new Health Commissioner. The NYC DOH then reversed itself on the WTC dust-contaminated car issue. This was after NYC was sued by the car owners. The new NYC administration reversed Mayor Giuliani and told owners they could retrieve their contaminated cars in March, 2002:

3/29/02

The letters went out earlier this month, informing the owners of almost 400 cars and trucks recovered from in and around the World Trade Center disaster site that the vehicles could be reclaimed at the Fresh Kills landfill. All the owners had to do was cover them "with a tarp or other impervious material" and haul them away on a flatbed.

That was the easy part. Then the owners had to have them cleaned with special equipment designed to prevent the inhalation of asbestos and other contaminants in the dust that blanketed Lower Manhattan after the Twin Towers collapsed.

. . .

The city advised the owners to "assess your vehicle for operational safety and have it thoroughly cleaned before operating it," recommending that it be cleaned with vacuums equipped with HEPA (high efficiency particulate air) filters to contain the asbestos-tainted dust.

. . .

[Cars Trapped at WTC Now Stuck in Another Mess: City Had Planned to Release Contaminated Vehicles Until Congressman Called in Federal Environmental Officials, By Rudy Larini, Newark Star-Ledger, 3/29/02]

5/14/02

But the city flip-flopped after meeting with insurance companies and being sued by owners who wanted their cars. The city sent owners letters telling them they could pick up their vehicles in March. The mailings included tip sheets explaining how to remove asbestos-tainted dust.

. . .

[WTC Cars Will Be Trashed, City, EPA to destroy hundreds of contaminated autos, By GREG GITTRICH, NY Daily News, 5/14/2]

The following is what the NYC DOH put up on its web site in January, 2002, advising how to clean contaminated automobiles:

1/02

How do I get asbestos off of me and my things after it has gotten on them?

To clean asbestos from:	Do this:
. . .	. . .
Cars, vehicles, bicycles	HEPA* vacuuming.

. . .

[New York City Department of Health & Mental Hygiene, Bureau of Environmental Investigations, Asbestos (ACM) Fact Sheet, 1/2002, http://www.nyc.gov/html/doh/html/ei/eiasbest.html]

The more detailed instructions on do-it-yourself car cleaning from the NYC DOH are given below:

Motorists living near the World Trade Center disaster site may face some challenges getting their cars cleaned and started if they were exposed to heavy levels of dust and soot from the collapse of the Twin Towers. Motorists are advised to clean the car's interior and exterior, as well as clean and inspect the engine, before starting their cars.
. . .
How can I protect myself from exposure to dust while cleaning the interior of my car?
If there are high levels of dust inside the car, wear a dust mask, preferably one that is double-banded. Make sure to use clean-up techniques that do not generate dust, such as wetting down the dust with water or using a HEPA (high efficiency particle air) vacuum, which will reduce dust recirculation.

How do I clean the interior of my car?
First, vacuum the interior of the car with a HEPA vacuum. If a HEPA vacuum is not available, a conventional or shop vacuum can be used, preferably with a HEPA or allergy bag. A conventional or shop vacuum should not be used in a garage or closed area without adequate ventilation.

After vacuuming, wipe the interior of the car with soap and water using disposable rags or sponges. Pay extra attention to the dashboard and vents, particularly if the vehicle is a 1998 model or newer. New cars have many computer and electronic devices located behind the dashboard that could be damaged by heavy dust. Place wet rags or sponges in plastic bags and dispose of while still wet.
. . .
What do I do when starting the engine for the first time?
Only after thoroughly cleaning the car's exterior, interior, and engine should motorists start their cars.

When starting the vehicle, do not race the engine. Let it idle approximately five minutes. Observe the tailpipe to see if any strange-looking vapors or materials spew out. The engine may have ingested some dirt that will be discharged when it is first started. If strange noises are heard or smoke is seen, shut the vehicle off and call a professional mechanic to inspect it.

Drive the vehicle slowly at first to make sure it is operating correctly. If so, take the vehicle on a highway so the force of the air can help flush dust and dirt from under the hood and other areas. Only then should the ventilation system be used, first in the recirculation mode to prevent underhood dust from entering the passenger compartment. After five or ten minutes, switch the ventilation system to bring in outside air.
. . .
How do I clean my vacuum equipped with a disposable dust bag?
Replace the vacuum dust bag, and place the old dust bag in a plastic bag and seal. Afterwards, dispose of the dust bags with your regular garbage.

Wipe the vacuum's exterior, including hose and other exposed parts, with a damp cloth. While still wet, place the damp cloth in a plastic bag, seal and discard with your regular garbage.

How do I clean my vacuum that is not equipped with a disposable dust bag?
Go outside and carefully empty the dust out of the vacuum dust container into a plastic garbage bag and seal. Discard the garbage bag with your regular garbage.

Wipe the vacuum's exterior, including hose and other exposed parts, with a damp cloth.

While still wet, place the cloth in a plastic bag, seal and discard with your regular garbage.

Replace the prefilters on a HEPA vacuum. Check your HEPA cartridge to determine if it needs to be replaced.

What do I do with my dirty clothing and dust mask?
Place dust mask in plastic bag, seal and discard with your regular garbage. Make sure to wash dirty clothes separately from other laundry.
. . .
[New York City Department of Health & Mental Hygiene, Responds to the World Trade Center Disaster, Recommendations for Motorists in the Area Affected by the World Trade Center Disaster. Undated, http://nyc.gov/html/doh/html/alerts/wtc7.html]

EPA overrides NYC DOH decision to return cars to owners

After a direct appeal from U.S. Representative Nadler to Administrator Whitman, EPA reversed NYC's decision to return the contaminated cars to the owners:

2/18/02
New York City officials have reversed a decision made in December and announced that owners of cars and trucks recovered from the World Trade Center would be permitted to retrieve their vehicles. Earlier, the city's health commissioner said the vehicles were potentially contaminated with asbestos and therefore unsafe to return to their owners. Why the turnaround? "Since the fall, data has been presented to the health department collected by a number of agencies, including the FDNY, NYPD, FBI and EPA, and those samples indicated that there were undetectable to low levels of asbestos found in samples taken from the cars," says Greg Butler, a spokesman for the New York City Department of Health.

But insiders from at least three of those agencies say they are familiar with the tests, and that some have shown levels of asbestos at triple the EPA's standards for contamination. "We're amazed that they're returning the cars," says one official. "I think it's very disturbing," says an EPA source. "I wouldn't feel comfortable driving a vehicle removed from Ground Zero."
. . .
[Newsweek, FALLOUT, Driving With Dangerous WTC Dust? 2/18/02]

5/14/02
Hundreds of cars towed from the streets around the World Trade Center and pulled from the collapsed complex's garages will be destroyed because of asbestos contamination, federal officials said yesterday. The city had planned to return the vast majority of the vehicles to owners in March. But days before the giveback, the Daily News revealed that the cars were covered with dangerous levels of asbestos, prompting the federal Environmental Protection Agency to step in.

Now the city and the EPA have determined that 890 vehicles the v ast majority of the

cars stored at Fresh Kills landfill on Staten Island are contaminated, based on dust samples.

"The vehicles will be destroyed," EPA spokeswoman Bonnie Bellow said yesterday. "They are being power-washed, and when possible the interiors are being vacuumed." The scrubbed cars will be hauled to a recycling center in Jersey City, where they will be shredded, Bellow said.

The News revealed March 8 that tests on vehicles conducted at the landfill showed that as much as 3% of the dust was asbestos more than three times the level that triggers federal cleanup rules.

. . .

But Rep. Jerrold Nadler (D-Manhattan) sent The News' findings to EPA chief Christie Whitman and urged her to issue an emergency injunction to stop the cars' release. A day later, the EPA asked to meet with the city.

. . .

[WTC Cars Will Be Trashed, City, EPA to destroy hundreds of contaminated autos, By GREG GITTRICH, NY Daily News, 5/14/2]

3/15/02

FOR WEEKS, local, state and federal officials have squabbled over whether the vehicles most of which are coated with fine powder of World Trade Center debris are safe. “We know the dust contains lead, zinc, mercury, asbestos, not to mention organic materials,” says New York Congressman Jerrold Nadler. “To release cars to owners is highly irresponsible.” On Thursday, Nadler wrote a letter to the Environmental Protection Agency’s Christie Todd Whitman urging her to file an emergency injunction against the city to prevent their release. On Friday, the EPA asked the city to meet with its officials before releasing the cars.

The New York City Department of Health told Newsweek it will honor the EPA’s request, but that its decision to release the autos was based on careful review of numerous environmental tests. “The data indicates that there is no significant risk to human health,” says Kelly McKinney, the NYC Department of Health’s Associate Commissioner for Environmental Health. “The fundamental way we work is to gather as much data as we can, to look at that data, compare it with whatever standards are available, compare it with our knowledge of the issues, and that’s what we did with this issue as we have with every World Trade Center issue.”

. . .

[What To Do With An Auto Graveyard, At the last minute, the EPA prevents the return of cars damaged in the World Trade Center collapse, By Julie Scelfo, NEWSWEEK WEB EXCLUSIVE, 3/15/02, http://www.msnbc.com/news/724974.asp]

(We don’t know what the NYC DOH did in terms of “careful environmental tests” to conclude that the cars were safe. This might be a good subject for a Freedom of Law information.)

By intervening and telling NYC officials that the must condemn the cars, EPA made a determination that they cannot be effectively decontaminated.

The guidelines that the NYC DOH had developed for cleaning the cars, on their face, appear to be equivalent to or more rigorous than the NYC DOH do-it-yourself guidelines for cleaning residences and offices. Thus, there is no reason to believe that the NYC DOH do-it-yourself residential and office cleanup guidelines would be any more effective for air conditioners, couches, carpets, TV's, computers, and refrigerators, etc.

The timing of these events is also of interest. Giuliani and his health commissioner held a joint press conference a few days before leaving office, making such a strong statement about asbestos and the inability to decontaminate a vehicle. Perhaps they felt free from political ramifications by making such statements right before leaving office.

Also, when EPA Administrator Whitman reversed the decision of the Bloomberg administration, saying again that the cars must be destroyed, it only took her a day after being alerted to the problem by Congressman Nadler. Why did she work so quickly in this instance to override the authority of NYC, when all along EPA had been claiming to the press and in testimony that EPA lacked jurisdiction over indoor air issues? Aren't exposures to asbestos in cars the same as any other indoor air exposure?

Despite being condemned, contaminated cars sold to consumers

11/1/02

Questions are being raised about how two dozen potentially toxic cars got into Connecticut. The vehicles were recovered from around the World Trade Center following the 9/11 attacks and were resold to dealerships.

"I thought it was the deal of the century I tell ya," says Joe Santino. That deal of the century Santino says he got was a vehicle that had been in Lower Manhattan on September 11th. "It should have never been allowed to happen."

At the end of July, almost a year after the terrorist attacks, Santino traded his old car for a used 2001 Chevy Suburban. He bought it at Diamond Auto in East Haven. "I knew them all my life and I trusted them," he said. The sales agreement fully disclosed the truck had come from the vicinity of the World Trade Center and Santino says the dealer assured him the vehicle was safe.

"He told me it was a World Trade Center recovery vehicle that it had dust and dirt and was all cleaned out."

It wasn't long before the Santinos started noticing something strange. "It was just a dust that was appearing everywhere," Tracy Santino said. "The front doors; you would slam them, dust used to come up out of the corners." Santino was especially concerned about the residue because his son has cystic fibrosis.

He took pictures, collected a bag of debris and had it tested at a local lab. "To my surprise, the guy called me the next day and told me don't drive the vehicle, get out of the vehicle and he told me it was loaded with asbestos."

> . . .
> A state investigation has identified 11 dealerships in Connecticut that bought World Trade Center recovery vehicles. "We are investigating reports that some of the dealerships may have known about this contamination and that kind of knowledge without disclosure is certainly a violation of our laws," Blumenthal said.
> . . .
> A spokesperson for Nationwide Insurance told us the vehicle came with documentation that it had toxic debris and was sold as salvage. When we asked for this in writing we were told the company needed to speak with an attorney.
> . . .
> *[WTNH, Car contaminated with asbestos sparks state-wide investigation, 11/1/02, http://www.wtnh.com/Global/story.asp?S=996505&nav=3YeXC9Xi]*

As another matter of interest, fire trucks and other rescue vehicles were also contaminated with WTC dust. The NY Environmental Law and Justice Project has been active in testing these vehicles on behalf of firefighters, and forcing decontamination, over the objections of NYC. For more information, see the website at www.NYenviroLAW.org . These fire trucks still had large pieces of debris lodged in cracks like the gap where windows roll up and down after more than a year. In one case, a piece of stationary with a World Trade Center address was found in the ladder mechanism a year after the disaster. The trucks were stationed in fire houses far from the WTC site, and accessible to children.

New EPA study finds hazardous levels of WTC contaminants after extraordinary cleaning procedures, requires extreme precautions during cleaning procedures

The following is a quote from a study released 6/4/03 by EPA that constitutes an admission of hazard. A mixed use residential and commercial building at 110 Liberty Street was found by EPA to have hazardous levels of WTC-related contaminants, such as asbestos, lead, silica, and fiberglass. The building is on the southeast corner of the perimeter of Ground Zero.

These are EPA's conclusions, not the conclusions of somebody else interpreting the data.

> The pre-cleaning analytical results for all of the data sets listed above were also evaluated to determine if the concentration of contaminants in the dust were elevated above health-based benchmarks. . . . Based on pre-cleaning data, there were ten residential units and five commercial units that exceeded a health-based benchmark for either lead, dioxin, PAH, or some combination of the three compounds.
>
> Based on post-cleaning data, an additional three residential units and one common area exceeded a healthbased benchmark for either asbestos, lead, MMVF, or alpha-quartz, or a combination of these compounds.
>
> Cumulatively, nineteen sites inside the building or 76 percent exceeded a health-based benchmark for one or more contaminants associated with the WTC collapse. This indicates that some contaminant concentrations exceeded health-based benchmarks.

> . . .
> *[There were 13 residential units and 6 businesses total.]*
>
> *[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, p. 108, http://epa.gov/wtc/confirmation_clean_study.htm]*

It is very important to note that none of the WTC dust that EPA tested in any of the apartments or businesses in the buildings was over 1% asbestos. (See page 17 of EPA study.) Thus, under the EPA, ATSDR, and NYC DOH guidelines for cleaning up WTC dust, no cleanup would have been required. Most of the apartments also had what EPA classified as "minimal dust," another criteria for triggering a professional asbestos cleanup, according to many EPA statements.

This study contains other highly relevant data, which are discussed in later sections of this report. For example, this study showed that for 4 out of the 7 apartments which EPA itself stated had only "minimal" levels of WTC dust, EPA had to clean 2 times in order for them to meet EPA's health criteria. For the 6 apartments with significant dust by EPA's definitions, 2 of them required 2 abatements, and 2 of them required 3 abatements before they were able to meet EPA's health standards.

Yet EPA had been advising citizens that they could do their own cleaning by the much less rigorous methods specified in the NYC DOH guidelines.

110 Liberty St. safety precautions contrast with NYC DOH do-it-yourself guidelines

As another admission related to this study, EPA considered even short term exposures to the dust inside 110 Liberty St. to be a hazard, even though it contained less than 1% asbestos. EPA would not allow the press access to observe the study, because they could not be outfitted with sufficient protective gear, like custom-size suits and HEPA respirators:

> The U.S. Environmental Protection Agency (EPA) today began sampling for contaminants in 110 Liberty Street, a still-unoccupied building close to the World Trade Center (WTC) site, in what will be a comprehensive test of the effectiveness of various cleanup techniques. Cleaning procedures to be tested include those that were recommended following the collapse of the WTC as well as others that may have been used in cleaning residential units. Comprehensive sampling will be conducted before, during and after the pilot cleanup.
> . . .
> IMPORTANT NOTE TO EDITORS: Due to potential health and safety concerns, workers will be suited up in custom-sized protective gear. EPA cannot allow media access to the building. *[emphasis in the original]*
> . . .
> *[EPA BEGINS WORK ON PILOT WTC DUST CLEANING STUDY, 6/19/02, http://www.epa.gov/wtc/stories/061902.html]*

The final report on the cleaning study also described extreme measures to allow residents back into the building even for the short time to secure their possessions, as seen below:

> Prior to commencement of cleaning operations, each tenant was contacted for the purpose of scheduling an appointment to determine the tenant's wishes relative to disposition of their belongings. At the appointment, residents were suited with hooded, powered air-purifying respirators (PAPR), which pull ambient air through a filter. The residents were advised of the applicable aspects of the Health and Safety Plan, including dust and respiratory hazards. (The Health and Safety Plan is discussed in Section 2.2 below.) The residents then accompanied EPA into the apartments to review contents and to discuss the planned disposition of personal property.
> . . .
> *[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, NY New York, NY, 5/03, EPA Region 2, http://epa.gov/wtc/confirmation_clean_study.htm]*

To put all these extraordinary safety precautions into context, when EPA did their pilot cleaning study, it was not the first time anyone went into this building after 9/11. Almost a year before, the building had undergone professional abatement. Then, the fire department went in prior to EPA's pilot cleaning study to clean up any layers of dust. It was only then that EPA cleaned the 110 Liberty St. address using full cover Tyvek® suits and HEPA respiratory protection, with an extensive health and safety program for the effort.

EPA, NYC, and FEMA had recommended that citizens should perform do-it-yourself abatements in residences and offices using the NYC DOH cleanup guidelines. The NYC DOH guidelines explicitly stated that even a drugstore dust mask was not required, much less a HEPA respirator. EPA never told the citizens that they might not be able to get their place clean with only one try, or that they should test to see if it was sufficiently clean, etc.

EPA voluntary cleanup uses maximum protective gear unless tenant has already performed a do-it-yourself cleaning WITHOUT any protective gear

EPA is now cleaning up WTC-contaminated apartments at no cost to residents in lower Manhattan. EPA has two different methods, depending on whether the apartment has high or low levels of WTC dust. If EPA believes that there is "substantial" dust, they will require the abatement workers to use full protective equipment, including full body suits and HEPA respirators. Residents will not be allowed to be present during the abatement for fear they could be exposed. The apartment has to be sealed off. Etc. The following are EPA's specifications for how workers and residents as well must be protected cleaning up apartments with "significant" WTC dust. Note that even residents have to be excluded from the work area for the brief one-time period that the cleaning takes place, because EPA now believes that it is too hazardous to be there.

Scope of Work B

Application: A visual inspection was performed and large or significant accumulations of dust or debris from the collapse of the WTC was observed in common spaces, residences or portions thereof (such as windows, terraces or balconies).

Residents will not be allowed in the work area. Residents may be present in the residence during cleaning in cases where the work area can be isolated by the erection of isolation barriers. In all other applications of Scope B it is assumed that residents will not be present in the residence.

. . .

3. At least one asbestos supervisor shall be present at each work place (work place is defined in Title 15, Chapter 1 of RCNY as the work area and the decontamination enclosure system).

4. Personal protective equipment including disposable clothing, gloves, and respirators shall be worn during this cleaning activity.

5. Warning signs shall be posted at all of the approach to the work area.

6. A decontamination enclosure system shall be installed at the entrance to the work area. The shower room shall be equipped with at least a 6-foot flexible hose for waste decontamination. A remote holding area with a lockable door for waste shall be located at the site and shall comply with all applicable storage rules and regulations. Waste removal shall not occur during worker shift changes or when workers are showering or changing.

An entry/exit log in compliance with the requirements set forth in Title 15, Chapter 1 of RCNY shall be maintained in the clean room. A remote decontamination enclosure system shall be considered when appropriate, i.e. inability to comply with the provision due to space limitation or other agency rules, such as for compliance with New York City Fire Department egress requirements.

7. HVAC systems shall be shut down and locked out or isolated locally.

8. Isolation barriers shall be installed with two layers of 6-mil polyethylene sheeting and sealed with tape.

9. Negative pressure ventilation equipment (air filtration devices (AFDs))shall be installed and operated during all cleaning activities. Equipment shall run continuously until clearance air monitoring. A minimum of one air change every 15 minutes shall be provided. When ducting to the outside is not possible, a second negative pressure ventilation unit compatible with the primary unit may be connected in series.

10. When conducting cleaning of common space in apartment buildings, the elevator control shall be modified to bypass the work area.

11. Prior to any cleaning of common spaces, isolation barriers (i.e. sealing off of all openings, including but not limited to windows, corridors, doorways, barriers, skylights, ducts, grills, diffusers, and any other penetrations of the workplace) shall be installed with two layers of 6-mil plastic sheeting sealed with tape. All seams of HVAC or other system components that pass through the work place shall also be sealed. All openings shall be HEPA vacuumed prior to installing the isolation barrier.

. . .

3. After the removal of debris, all surfaces will be cleaned in accordance with the procedures specified in Scope A. After all surfaces have been cleaned, a second cleaning shall be performed. This results in two full cleanings of all surfaces, with the following exception. Water extraction cleaning of carpets and fabric covered furniture will be conducted only once. Surfaces include but are not limited to walls, floors, ceilings, ledges, trims, appliances, equipment and furnishings.

. . .

[http://www.epa.gov/wtc/factsheets/cleaning_sow.pdf]

By requiring all these safety procedures in EPA's voluntary cleanup program, EPA is implying that there were hazards to all the citizens who cleaned up their own apartments and offices with "significant" accumulations of dust/debris, using the NYC DOH do-it-yourself guidelines. EPA is implying that citizens also should have taken at least the same precautions as in EPA's "Scope B" cleaning protocols. As demonstrated in Sections E and F, citizens performed their own do-it-yourself cleanups where there were heavy layers of dust, with no respiratory protection or any other precautions.

The following is another piece of evidence implying an EPA conclusion of hazard during do-it-yourself citizen cleanups: EPA actually stated that the full moon-suit protective gear would not be required if the apartment had already been cleaned up by citizens:

> Following the assessment, the Project Monitor will determine the appropriate cleanup approach. Most residences that have already been cleaned will be addressed under EPA's "Scope A" cleanup described in detail below. *["Scope A" does not require respiratory protection, containment, or exclusion of residents during cleaning.]* Residences where there is still significant accumulation of WTC dust and/or debris (typically unoccupied) will be dealt with under EPA's "Scope B" cleanup which adds precautions to protect workers and prevent spreading possible contamination while removing the bulk dust/debris. Where pockets of bulk dust are found in previously cleaned homes (between windows, inside air conditioners, etc.), these pockets of dust will be addressed under a "Modified Scope B" cleanup. *[emphasis added]*
> . . .
> *[WTC RESIDENTIAL DUST CLEANUP PROGRAM CLEANING & TESTING FACT SHEET, http://www.epa.gov/wtc/factsheets/cleantest.html]*

This means that any prior cleaning by the citizens (or volunteers such as from the Southern Baptist Convention) should have required the same protective gear and other measures in order to protect their health.

Admissions of inadequate indoor air measurements and cleanup hazards

The following is EPA's own account of a 10/9/01 meeting, where it admits that its outdoor air tests are not relevant to indoor air measurements. This EPA statement was included as an appendix to a report by the FEMA Office of the Inspector General. EPA's statements also constitutes an admission that there was a hazard to citizens living in, using, or cleaning up residences and offices without protective measures and professional abatement:

> A group of concerned legislators from lower Manhattan coalesced as the "Ground Zero Elected Officials Task Force." These officials began early on to request assistance be provided to residents in the cleanup of their buildings. They identified several buildings which they wanted sampled indoors. EPA consulted with representatives of the New York City Department of Health regarding whether NYC wanted any support in testing these buildings. New York City did not request EPA action. The Ground Zero officials

commissioned a sampling effort the results of which were provided in a report dated October 12, 2001 to EPA and others.

On September 28, 2001 EPA attended a public meeting at which lower Manhattan residents requested cleanup assistance to be able to return to their residence. FEMA was represented at this meeting by Marianne Jackson.

On October 9, 2001 EPA representatives (Bruce Sprague, Kathleen Callahan) met with FEMA representatives including Larry Somer and Kathryn Humphrey to discuss whether FEMA's assistance programs could provide residents with the additional financial support that would be needed to have professional asbestos abetment cleaners hired to clean the residences. FEMA invited EPA to sit in on a meeting that day with lower Manhattan residents, community board representatives and representatives of the Battery Park Business coalition. This meeting's principle topic was the additional support residents needed to cleanup safely and the business coalition was considering providing funding support. Ultimately, this initiative did not take place. FEMA did attempt to provide greater assistance to residence who were displaced from their affected apartments. However, there continued to be pressure for more government assistance for residential cleanup. Although most air samples taken for asbestos in the outdoor (ambient) environment did not show levels of asbestos exceeding the benchmark EPA used to assess the state of the environment surrounding the WTC site, the dust did contain asbestos in variable amounts and locations and with cleanup activity this could be entrained in the air, posing an inhalation health risk. *[emphasis added]*

. . .

[EPA's comments on draft FEMA report, included as Appendix H in: FEMA's Delivery of Individual Assistance Programs: New York - September 11, 2001, dated: December, 2002, p. 65, http://www.fema.gov/ig/iaprograms.shtm]

Testimony by EPA Region 2 Administrator is admission of hazard

The testimony by Jane Kenny, EPA Region 2 Administrator, in February, 2002, also constitutes an admission that prior statements by Administrator Whitman about long and short term safety were incorrect:

2/12/02

US Representative Jerrold Nadler, a Democrat who represents Lower Manhattan, said he was "alarmed and outraged" by Whitman's statement. Even Thurston, more optimistic than most outside witnesses, agreed that Whitman was "too quick to declare the air 'safe.'"

Jane M. Kenny, EPA's regional administrator, defended the agency. "We used the most extensive testing ever," she said. "There was a lot of confusion about what exactly was safe, and was not. . . . The people in public service were doing the best they could."

. . .

[Concerns intensify on ground zero dust, By Fred Kaplan, Boston Globe, 2/12/2002, coverage of the US Senate hearing of 2/11/02]

2/12/02

On Sept. 18, just one week after the World Trade Center collapse, tens of thousands of office workers near Ground Zero were given the go-ahead by federal and local safety officials to return to their jobs. At the time, our government leaders wanted to return to normal as soon as possible, and especially wanted to reopen the nation's critical financial markets.

. . .

Several times during the hearing, Lieberman asked EPA regional administrator Jane Kenny to respond directly to criticisms that Whitman's early reassurances to those who were feeling ill from the downtown air may have been confusing.

"I don't know whether the comments were confusing or not," said Kenny in a halting, trembling voice. "People were hearing different things."

. . .

[Casting a Dark Cloud Over City, EPA, by Juan Gonzales, NY Daily News, 2/12/02]

Admission that indoor air testing necessary – outdoor testing irrelevant

EPA Headquarters has acknowledged now that its outdoor testing was irrelevant to showing asbestos levels indoors. On February 12, EPA Administrator Christine Whitman wrote to Senator Hilary Clinton, stating:

> Fortunately, the results of our testing of outdoor environmental conditions to date have consistently indicated that air quality in Lower Manhattan does not pose a long-term risk to those who live, work, or visit there.
>
> . . .
>
> People are also justly concerned about indoor environmental quality. The enormous amount of particulates released by the collapse of the World Trade Center towers permeated many of the surrounding buildings, including apartments, offices, and other indoor spaces throughout the area surrounding Ground Zero.
>
> As you may recall, in the days immediately following September 11th, the City of New York assumed responsibility for indoor environmental quality. . . . Despite the City's best efforts to address indoor environmental issues, it is apparent that many concerns and challenges remain. I am committed to providing additional assistance to the City and its residents and stand ready to do so. In addition, as you suggested yesterday, I will be working with our local, state, and federal partners to establish a Task Force on Indoor Air in Lower Manhattan, so that we can move as quickly as possible to address the remaining concerns we all share.
>
> . . .
>
> *[emphasis added] [EPA Administrator Whitman to US Senator Clinton, letter dated 2/12/02, one day after US Senate hearing on indoor air]*

From Section B of this report, there were many official statements by EPA equating outdoor air measurements with indoor air measurements. The NYC Dept. of Environmental Protection (NYC DEP) made a point of testing outdoor air near each public school, and then using these tests as a basis for claiming there were no hazards to the children inside, breathing and stirring up WTC dusts in a confined space, unless, of course, that dust was over 1% asbestos, which it rarely was.

As discussed in Section E, the NYC DEP instructed landlords only to test dust indoors. They were not told to test interior air at all. The following is a letter where residents in Battery Park city are told that the outdoor air in their area was been tested and found safe, and that the only criteria for opening of the buildings was whether the dust, not the air, inside apartments was over 1% asbestos.

> 10/25/01
> EPA is requiring the strictest protective standard under AHERA, the Asbestos Hazard Emergency Response Act, for asbestos in outdoor and indoor areas. (This standard is used to determine whether children may reenter a school building after asbestos has been removed or abated.) To be as protective as possible, EPA, together with the NYCDEP and all the other health and environmental agencies, are requiring school reentry standards in tests around the World Trade Center site. NYCDEP, USEPA, and NYC Department of Sanitation worked with the Battery Park City Authority and owners of area buildings to perform cleanups of all dust in exterior areas with HEPA vacuums and wet washing. NYCDEP and EPA have both conducted tests in exterior spaces and all exterior areas of Battery Park City passed their strict protective standards before being opened again to the public.
>
> EPA is using the 1% definition in evaluation exterior dust samples in the Lower Manhattan area near the World Trade Center. All affected landlords have been instructed to test dust samples within their buildings utilizing this standard. All Battery Park City landlords were notified that they should not reopen any building until a competent professional had properly inspected their premise. If more than 1% asbestos was found and testing and cleaning was necessary, it had to be performed by the certified personnel. *[emphasis in the original]*
> . . .
> *[letter from NYC DEP Commissioner Meile to residents of Battery Park City, 10/25/01]*

Although neither EPA nor the NYC DEP or DOH did any indoor air testing prior to Clinton's initiation of a Senate oversight hearing, EPA and NYC were active in issuing statements that there was no problem with indoor air or outdoor air, as seen from Sections B and C.

Professional abatement and better testing of NYC EPA building

Section N provides a detailed account about one of EPA Region 2's most shameful actions in the WTC aftermath, their evacuation and professional abatement of their own building at 290

Broadway, far north of what EPA and NYC DOH officials were then calling the contamination zone near Ground Zero.[4] EPA had its building tested on 9/13/01 and 9/14/01, and decided to professionally abate the building within the week.

This incident constitutes admissions on several levels by EPA on 9/14/01:

a. The zone of contamination was much farther north than being admitted to the public. The EPA building at 290 Broadway is north of the Warren Street boundary, the furthest north point where the NYC DOH recommended special apartment and office cleaning measures in its 9/17/01 do-it-yourself cleaning guidelines.

b. The necessity of indoor dust testing was admitted. If air tests were negative, which they all were for the 290 Broadway building, then apparently testing of the settled dust was also necessary to determine whether there was a hazard. EPA found nothing in the air. But the dust revealed asbestos. On the basis of dust testing alone, it abated its own building, evacuating employees for a week for their whole building cleaning. EPA has denied testing settled dust inside buildings for the rest of NYC, saying that it is not an indicator of any hazard and unnecessary. EPA was adamant that only air will be tested, despite intense lobbying by concerned citizens and environmental groups.

c. Better test methods were needed for assessing the contamination. EPA had electron microscope TEM tests for settled dust in their building. They were positive for asbestos. However, the light microscope tests of the same dust in their building (PLM method) were negative. EPA only used the PLM light microscope methods for the rest of NYC after the WTC. And EPA even refused free TEM electron microscope dust method capabilities for the rest of the city on 9/12/01, when Region 8 called them and offered to divert their laboratory contracts using TEM scopes to the WTC evaluation.

Although more details are given later in this report, the following juxtaposition of news articles is telling. Just three days after the disaster, EPA claims to the press that testing in its own building showed no hazards. Then, EPA admits to buying respirators for its employees.

> <u>9/15/01</u>
> EPA spokeswoman Bonnie Bellow said Friday that air tests Thursday in two federal buildings in lower Manhattan - 290 Broadway and 26 Federal Plaza - did find airborne asbestos, but that none of the samples exceeded one-tenth of the maximum level allowed in workplaces by the Occupational Safety and Health Administration.
>
> "There's nothing at this point that indicates that business can't resume" in the Wall Street area on Monday as scheduled, she added.
> . . .
> *[Tests: Dust Not a Danger Here, by Dan Fagin, Newsday, 9/15/01, http://www.newsday.com/news/health/ny-lidust152367598sep15.story]*

10/9/01

Even as they were reassuring the public, EPA officials distributed respirators late last week to their own employees in the Federal Building. The handouts came in response to complaints from the employees of terrible air quality in the building, a few blocks from the Trade Center site.

EPA spokeswoman Mary Helen Cervantes said the masks were distributed for the voluntary use of those employees who might have respiratory ailments or who feel some temporary discomfort from the air.

. . .

[Asbestos Higher in Newer Test, 10/9/01, by Juan Gonzalez, NY Daily News]

1/18/02

After the World Trade Center attacks, the EPA told residents near ground zero to clean their apartments with wet rags and mops. At the same time, the EPA had its downtown offices professionally cleaned for hazardous materials.

. . .

Reports that the EPA's Manhattan offices had been professionally cleaned came out in a Dec. 19 conference call . . . for the EPA's regional and national asbestos coordinators, said Cate Jenkins, a senior chemist in the EPA's Hazardous Waste Identification Division. Walter Mugdan, the EPA's counsel for Region 2, told listeners, including Jenkins, that the offices had been cleaned professionally for hazardous materials.

. . .

[House Member Questions EPA Office Cleanup, by Christine Houghney, Washington Post, 1/18/02]

5/9/02

But Ms. Jenkins and other critics of her agency's performance have said that one of the EPA's failings was its unwillingness to urge New York to use the most-up-to-date method of asbestos testing -- a method employing electron microscopes that the EPA has used elsewhere. The city instead advised building owners to use only an older technique, in which testers search for contaminants using polarized-light microscopes that work much like ones used in high-school chemistry labs. Electron microscopes, used with computers, can detect asbestos fibers that light scopes don't reveal.

The EPA's experience with its own New York building illustrated the distinction. Just days after Sept. 11, EPA officials in lower Manhattan had their building lobby at 290 Broadway decontaminated after tests using an electron scope turned up particles of asbestos. Tests by a light scope had failed to turn up anything.

. . .

[AFTERMATH OF TERROR, Bureaucratic Buck-Passing Delayed Asbestos Cleanup After 9/11 Attacks, By JIM CARLTON, 5/9/02, THE WALL STREET JOURNAL]

"Potential long term health risks" admissions by EPA

Although not completely definitive, EPA started making statements to the press and in its internet postings using vague phrases like "confidence" and "assurance" and "potential health risks" after their 2/12/02 announcement to study indoor air, and particularly after the 5/8/02 announcement that it would offer free voluntary residential cleanups. Emphasis is added in the excerpts below

> There are two key studies, which were conducted for EPA, which examined the effectiveness of various cleaning methods on carpets impacted by asbestos. The first found that cleaning asbestos- contaminated carpets with a hot-water extraction cleaner was most effective, reducing asbestos levels by approximately 70%. The second study again found that a hot-water extraction cleaner was most effective, producing a 60% reduction in asbestos levels in contaminated carpets.
> . . .
> However, because of the results of these studies, EPA cannot guarantee to residents that all asbestos fibers, if present, can be removed from fabric items. EPA anticipates that available cleaning methods for fabric items that were significantly impacted by dust or debris may not be sufficient to address the concerns of residents or EPA's concern for people's long term health.
> . . .
> *[WTC Residential Dust Cleanup Program: Carpets, Upholstered Furniture and Other Fabric Surfaces Fact Sheet, undated, http://www.epa.gov/wtc/factsheets/fabrics.html]*
>
> ---
>
> 8/16/02
> EPA announced today that it will start the scheduling of testing for airborne asbestos in residences in lower Manhattan today . . . Residents living below Canal, Allen and Pike Streets may ask to have their homes cleaned and tested for airborne asbestos by certified asbestos contractors or they may ask for testing alone . . .
> . . .
> Some dust from the World Trade Center collapse has been shown to contain asbestos and other contaminants. EPA believes this action-oriented cleanup and testing program will reduce risk of possible long-term exposure and related health effects.
> . . .
> *[WTC RESIDENTIAL DUST CLEANUP PROGRAM MEDIA & HOTLINE ADVISORY Asbestos Testing to Start Immediately; Deadline for Assistance Requests Extended, 8/16/02, http://www.epa.gov/region02/news/2002/02080.htm]*
>
> ---
>
> 9/4/02
> Mears, the EPA spokeswoman, conceded that the HEPA vacuuming and wet extraction the agency is offering will remove only 60% to 70% of asbestos fibers.
> . . .
> *[A Toxic Legacy Lingers as Cleanup Efforts Fall Short, By Maggie Farley, Los Angeles Times, 9/4/02]*

8/16/02

[EPA press release]

EPA announced today that it will start the scheduling of testing for airborne asbestos in residences in lower Manhattan today . . . Residents living below Canal, Allen and Pike Streets may ask to have their homes cleaned and tested for airborne asbestos by certified asbestos contractors or they may ask for testing alone . . .

. . .

Some dust from the World Trade Center collapse has been shown to contain asbestos and other contaminants. EPA believes this action-oriented cleanup and testing program will reduce risk of possible long-term exposure and related health effects.

. . .

[WTC RESIDENTIAL DUST CLEANUP PROGRAM MEDIA & HOTLINE ADVISORY Asbestos Testing to Start Immediately; Deadline for Assistance Requests Extended, 8/16/02, http://www.epa.gov/region02/news/2002/02080.htm]

5/28/03

In an interview with CQ Homeland Security, Mary Mears, EPA's chief of public outreach development for New York, New Jersey, Puerto Rico and the Virgin Islands, said the risk to health was not immediate. "While the risk is low, there is still a long term health concern for residents who did not have World Trade Center dust professionally cleaned out of their homes," she said by telephone Tuesday.

. . .

[Poisons from Towers Crash Still Loose in Manhattan, Rep. Nadler Says, Calling EPA a 'Disgrace,' By Kent Vander Wal, 5/28/03, http://www.columbia.edu/cu/libraries/indexes/cq-homeland-sec.html]

Admission that exterior dusts responsible for "recontamination"

There are also implied admissions of hazards to occupants of buildings during EPA's program cleaning building exteriors in lower Manhattan:

The cleanup of residual dust and debris from building rooftops, facades and canopies began June 8, 2002.

. . .

The work is being done to prevent resuspension of WTC dust in the air. Facade cleaning, requiring manual lifts for lower buildings and full scaffolding for others, addresses all faces of the building, with special attention given to window ledges and setbacks. Surfaces are HEPA vacuumed, wet wiped and then given a final wash. An independent contractor is conducting air monitoring to insure that the cleanup work itself does not cause resuspension. All work is checked by both NYCDEP and EPA inspectors.

. . .

If building owners are unwilling to either clean the dust and debris themselves or allow city contractors to do the work, NYCDEP will sample the dust and if sampling finds

asbestos, the city will issue a Commissioner's Order requiring the owner to conduct the cleanup.

EPA's indoor residential dust cleaning will be coordinated with the exterior cleanup work to avoid recontamination.

. . .

[emphasis added] [Remaining Exterior Cleanup Work Underway, EPA fact sheet, undated, after 6/02, http://www.epa.gov/wtc/factsheets/exterior.html]

4/6/02

Within a few weeks, efforts will begin to clean the exteriors of hundreds of buildings around the World Trade Center site, to keep pollutants like asbestos from blowing off them and into apartments, city and federal officials said today.

. . .

"A lot of what we're seeing occur, and what we think is coming into apartments, may be coming, blowing in with the wind," said Christie Whitman, the Environmental Protection Agency administrator. "While the streets were cleaned up, the outsides of the buildings themselves were not cleaned up."

. . .

[emphasis added] [Cleaning Set for Exteriors Near 9/11 Site By RICHARD PÉREZ-PEÑA, 4/6/02, NY Times]

After-the-fact claim of advice to use professional cleaning constitutes admission

The fact that EPA falsely claimed after-the-fact that it recommended professional cleaning, discussed later in this report in Section E, also constitutes an implied admission of hazard. EPA did not make any recommendations for professional cleaning, which is easy to demonstrate by the written record. Nonetheless, the claim that this recommendation was made strongly implies a recognition of hazard.

FEMA grants to professionally clean apartments constitutes finding of hazard

An implicit finding that residents were being exposed to hazardous materials in their residences, and during any do-it-yourself cleanups, comes from FEMA. FEMA provided grants to individual residents to either relocate or have their apartments professionally cleaned. This FEMA action was on 10/17/01, a little over one month from the disaster. This was long before the EPA voluntary cleanup program was announced on 5/8/02.

10/17/01

Residents affected by the Sept. 11 WTC attack who receive a check for rental assistance may use the funds for cleaning if it will solve their housing needs.

"People may use their assistance checks to meet needs specific to this disaster," said Michael Cosbar, a housing officer for the Federal Emergency Management Agency (FEMA). "That means giving people the option to decide what makes the most sense for them - either cleaning their homes and apartments to move in more quickly or finding someplace else to live."

Anyone who receives a check for temporary rental assistance will also receive a letter clarifying how to use the check. The letter explains that the assistance check may be used for housing-related expenses other than rent if the occupant believes the amount of the check will be sufficient to meet housing needs. Those who use the check for purposes other than rent, such as cleaning, will not be eligible for additional rental assistance.

[Options for Using Your FEMA Rental Assistance Checks, 10/17/01, http://www.fema.gov/diz01/d1391n32.shtm]

If you were affected by the World Trade Center attack and receive rental assistance from the Federal Emergency Management Agency (FEMA), you may use the funds to clean your residence.

"We're giving people the option to decide what makes the most sense for them either cleaning their dwellings or finding someplace else to live," said Michael Cosbar, FEMA housing officer. Instead of using the check to rent another place, renters can use the funds to clean their residences.

. . .

[Assistance for cleaning your apartment, FEMA Disaster Assistance Guide, 11/2/01, Issue No. 2, New York, http://www.fema.gov/pdf/rt/2001_ny_2.pdf]

FEMA does not explicitly state concerns over hazardous materials, but the record shows that FEMA had already been participating in meetings with EPA and NYC officials over the indoor asbestos contamination and cleanup problem.[5]

FEMA IG final report – "residential cleanup programs should have begun earlier"

The program to test and clean residences in lower Manhattan did not commence until months after the disaster. Although FEMA has the responsibility to coordinate recovery from presidentially declared disasters, FEMA must depend on the particular expertise of EPA in circumstances involving possible air contaminants or environmental hazards. EPA must confirm that such hazards constitute a public health and safety threat before FEMA can provide funding for emergency response. FEMA should be more proactive in requesting EPA to conduct necessary testing and/ or studies to determine if a public health or safety threat exists in future, similar disasters so that cleaning efforts can begin much earlier in the recovery phase. FEMA also should address the roles of State and local agencies in such circumstances, as consultation with these agencies would provide useful information in review or evaluation.

. . .

> *[FEMA's Delivery of Individual Assistance Programs: New York - September 11, 2001, dated: December, 2002, p. 31, http://www.fema.gov/ig/iaprograms.shtm]*

FEMA IG draft report says that legislation is needed so FEMA would have power to force EPA to do indoor testing

The FEMA IG draft report contained a direct criticism of EPA for not conducting testing of inside residences earlier. It called for legislation to change the Federal Response Plan (FRP, the authority under the Stafford Act which authorizes FEMA activities) so that it could force EPA to conduct indoor testing for hazardous substances.

However, EPA was critical of this finding, and the FEMA IG removed it from their final report. The statement in the draft FEMA IG report was as follows:

> Despite FEMA's and EPA's apparent regulatory and legislative authority to act, their actual roles and responsibilities were not defined early on in the recovery effort To avoid this ad hoc approach in the future, FEMA, in conjunction with EPA, should amend the Federal Response Plan, authorizing FEMA to direct EPA to conduct testing and cleaning of residences for hazardous materials during similar disaster recovery efforts.
> . . .
> *[FEMA's Delivery of Individual Assistance Programs: New York - September 11, 2001, dated: December, 2002, Appendix H, EPA's comments on FEMA IG draft report, which reiterated the language in the draft FEMA IG report, p. 68, http://www.fema.gov/ig/iaprograms.shtm]*

The final FEMA IG report instead states the following:

> The unparalleled terrorist events of September 11, 2001, in New York City resulted in catastrophic physical damage and loss to the business and residential infrastructure in the lower part of the Borough of Manhattan. The majority of individuals affected by this disaster required assistance to address economic losses, <u>the possibility of air contaminants in residences</u>, and crisis counseling. Because the Federal, State, and local governments had never before experienced some of the consequences of this kind of event, FEMA re-examined its authorities under the Stafford Act and updated, as necessary, its interpretations for administering applicable programs. The authorities of the Stafford Act are not necessarily sufficient to meet all needs or demands but Congress did not intend for FEMA to return all disaster victims to their pre-disaster status. *[emphasis added]*
> . . .
> *[FEMA's Delivery of Individual Assistance Programs: New York - September 11, 2001, dated: December, 2002, p. 7, http://www.fema.gov/ig/iaprograms.shtm]*

Report by EPA's ORD admits hazardous exposures

A draft report issued 10/02 by EPA's Office of Research and Development contained findings which constitute admissions of at least potential, as yet undefined hazards. All of the data summarized in the EPA ORD report had been available to EPA and the public as soon as September, 2001, and the immediate months that followed. Thus, EPA cannot claim that any information in the 10/02 draft ORD report was new to them.

> Except for exposures on September 11 and possibly during the next few days, persons in the surrounding community were unlikely to suffer short-term or long-term adverse health effects caused by exposure to elevations in ambient air concentrations of the contaminants evaluated in this report. These elevated concentrations were measured mostly within and very near Ground Zero, and they lasted for 1 to 3 months after September 11. . . . Exposures that were specific to the indoor environment were also not explicitly addressed in this assessment. . . . This assessment focuses on the inhalation pathway. Exposure can potentially occur via inhalation, dust ingestion and dermal contact with contaminated dust on surfaces. . . . The health assessment conducted in this study assumed that ambient air measurements were representative of long- and short-term exposures. In some cases, this could be misleading or inappropriate, particularly if indoor concentrations are higher than outdoor concentrations. It is emphasized that the evaluations in this document focus on ambient, outdoor measurements. *[Emphasis added. Note that the report carefully differentiates between ambient and indoor exposures.]*
>
> . . .
>
> Some additional future considerations could include: evaluating other contaminants that were measured, evaluating the indoor environment in more depth, evaluating other pathways of exposure and other exposure media such as dermal contact to contaminated dust, investigating the combined effects of exposure to more than one contaminant, conducting further toxicity testing with laboratory animals, and considering results from ongoing epidemiological studies.
>
> . . .
>
> After late September, indoor exposures to such dust probably warrant more concern than outdoor exposures for possible acute irritative effects or more chronic health effects, not only because of the basic nature of some constituent particles but also because of other unusual features, such as slender microscopic glass fibers with toxic materials attached to them or very fine particles composed of unusual combinations of silica coalesced with lead or other toxic materials.
>
> . . .
>
> However, susceptible persons (especially any pregnant women) who may have experienced extended exposures to elevated Pb levels within WTC Ground Zero work areas while not wearing appropriate respiratory protective gear or who were exposed to indoor WTC-derived dusts with high Pb loadings could possibly be at increased risk for chronic health effects.
>
> . . .
>
> Limited available evidence suggest the incursion of asbestos to the indoor environment. A small study which sampled the indoor environment of two apartments on September 18 showed very high indoor levels of asbestos. A larger and more systematic study which sampled in November and December of 2001 suggested that indoor levels of asbestos in dust were slightly higher near the WTC as compared to indoor levels in dust

further away. Current efforts by the EPA focus on the measurement and clean-up of residential apartments near the WTC.

. . .

The highest measurements of asbestos available for evaluation in this report were taken within two apartments sampled on September 18, 2001. One apartment was highly affected by the collapse of the WTC towers with completely shattered windows and dust piled throughout the apartment. The other was in a building that had little exterior damage, but had visible dust on surfaces within the building and in the apartment sampled. In the severely damaged apartment, five air measurements of asbestos ranged from 6277 to 10,620 S/mm2 using the AHERA protocol. . . . The six indoor samples in the less impacted apartment exceeded the 70 S/mm2 AHERA standard at levels ranging from 141 to 379 S/mm2.

. . .

For residents, contacts with contaminated dust will occur mostly indoors where people spend the majority of their time. The health assessment conducted in this study assumed that ambient air measurements were representative of long- and short-term exposures. In some cases, this could be misleading or inappropriate, particularly if indoor concentrations are higher than outdoor concentrations. It is emphasized that the evaluations in this document focus on ambient, outdoor measurements.

. . .

Individuals visiting, residing, or working in buildings not adequately cleaned before reoccupation could have been subjected to repeated, long-duration exposure to many of the components from the original WTC collapse found by Lioy et al. in settled dust to the east of the WTC. Lioy et al. noted that long, narrow glass fibers in the WTC-derived dust had various potentially toxic materials attached to them and could contribute to acute short-term irritative effects and possibly to more chronic health risks.

Also of potential concern would be any extended indoor air exposures to finely pulverized building materials (e.g., calcium, silicon, iron, and sulfate) in PM particles, to PM of either fine or coarse size containing marked elevations of certain metals, or to fine PM containing usual combinations of silicon coagulated with metals or other toxic materials. Lioy et al. directed notable attention to indoor dust loadings of lead as posing potential chronic health risks. The possible contributions of certain other metals (e.g., nickel, chromium) found in settled dusts or airborne PM to irritative symptoms also need further evaluation. The discussions below for lead, nickel, and chromium contain more information on the possible bases for concern with these particular metals. The issue of potentially greater toxicity being associated with unusually increased quantities of very fine or ultrafine particles present in airborne PM also needs to be evaluated further.

. . .

Some newly available findings from the laboratory toxicity studies of WTC-derived dusts may offer insights into potential health responses associated with exposures on September 11 to WTC-derived materials in the initial WTC building collapse dust cloud and later exposures to WTC-particles deposited indoors. . . . These results suggest possible limited, short-term lung inflammation effects from exposures to high concentrations of WTC dust (as may have occurred mainly on September 11) or possible long-term airway hyperresponsiveness that might portend more prolonged sensitivities and irritative symptoms for persons experiencing extended high-level exposures to WTC-derived dusts indoors.

. . .

However, as Lioy noted, indoor exposures to lead-contaminated WTC-derived dust that penetrated indoors could continue to pose risks to individuals re-occupying buildings not

cleaned by effective decontamination procedures.
. . .
Some of the key conclusions of the NYCDOHMH/ATSDR final report are: . . . Some settled surface dust could become airborne if disturbed. Therefore, people could potentially inhale the asbestos, SVF, mineral components of concrete (quartz, calcite, and portlandite), and mineral components of building wallboard (gypsum, mica, and halite) found in settled surface dust of some lower Manhattan residences. Because the weight of dust present in the areas sampled was not determined, it is not possible to determine whether any particular residence had an elevated dust loading.
. . .
[emphasis added] [Exposure and Human Health Evaluation of Airborne Pollution from the World Trade Center Disaster, External Review Draft, 10/02, National Center for Environmental Assessment, Office of Research and Development, EPA, Publication Nos. NCEA - W - 1395, or EPA/600/P-2/002A, http://www.epa.gov/ncea or http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=36387]

The EPA ORD report was described as follows in one press story:

12/31/02
The report is titled "Exposure and Human Health Evaluation of Airborne Pollution from the World Trade Center Disaster" and was authored by the EPA Office of Research and Development in Washington.
. . .
According to Lowenherz, a comprehensive study should include data on indoor air tests and on contaminant levels in settled dust. The EPA report acknowledges that "evaluating the indoor environment in more depth" is one of several future areas of study.

"EPA's Region 2 office is continuing studies of indoor air," said Washington based EPA spokeswoman Suzanne Ackerman. "It was more a question of priorities, and the outdoor air was what people were most concerned about at first."
. . .
[EPA Report Buries a Revelation, 12/31/02, By Juan Gonzalez, Daily News]

"Forum" investigating inferior tests after 9/11 compared to other EPA sites

EPA has convened a new "forum" to investigate why EPA Region 2 used inferior laboratory test methods after 9/11, compared to the test methods that were being used by EPA Region 8 for the Libby, MT Superfund site. Convening this forum is an admission that NYC citizens were treated disparately, and worse, than other communities by EPA. This new forum is discussed in Section M.

Please see Section L for information on the refusal by Region 2 of free, superior testing methodologies from Region 8. On 9/12/01, in a conference call, Region 8 offered Region 2 free access to its superior testing facilities using electron microscopes to find asbestos in WTC fallout.

But Region 2 refused, saying:

> We don't want you fucking cowboys here. The best thing they could do is transfer you to Alaska.

The following news article describes this new forum. Notice that EPA has expressed concern over being sued for using inferior test methods after the WTC disaster.

> EPA OFFICES BEGIN EFFORT TO ENSURE CONSISTENT ANALYTIC METHODS
> Date: March 19, 2003 -
>
> With backing from top agency enforcement officials, EPA's research office has begun an initiative to ensure the uniformity of the agency's analytical methods across regions and program offices.
>
> The new Forum on Environmental Measures is likely to enhance the credibility and defensibility of EPA assessments of environmental conditions in court, sources say. As a result, it is being strongly endorsed by EPA enforcement chief J.P. Suarez, in part because it would enhance the agency's legal clout and standing with the regulated community.
>
> **The effort was prompted by concerns following Region II's investigation of environmental hazards at the World Trade Center site and their consistency with asbestos measures used by EPA Region VIII in Libby, MT.**
>
> "When the agency uses different measures, then people can begin to ascribe motives, so the Administrator prompted us to look into this," according to EPA research chief and science advisor Paul Gilman. "It's hard to have credible decisions without credible data," Gilman adds and notes that enforcement officials are actively supporting the plan in part because of their need to defend environmental forensic techniques in court.
>
> An EPA official adds "this is an effort to make the science better, to put good science out there for the regulated community to use. If it's clear what's expected and companies still ignore validated measures, then there will be less argument about going after those who are out of compliance." The agency's Office of Research & Development is poised to formalize the charter for the new group that will examine the creation, verification and validation of environmental methods and training across the agency.
> . . .
> EPA officials say several flaws in how some measures work in the field . . . have hurt EPA in court even though in the lab the methods were sound. "In certain management scenarios, these methods needed to be refined" to accurately measure what they were intended for, according to one EPA source.
>
> The new group will be co-chaired by Ramona Travato of EPA's Information Office and Region II's William Muszynski. . . .
> . . .
> *[emphasis added]*
> *[Inside EPA Environmental Policy Alert, 3/19/03, www.insideepa.com]*

E: RE-OCCUPYING AND CLEANING

– EPA and NYC DOH UNSAFE INEFFECTIVE RECOMMENDATIONS

"Did people return . . . without properly cleaning their home of WTC dust? . . .* EPA's intended message . . . Plan to address these issues in survey of 5,000 NYC residents. Survey poses 43 questions about communications received by the public and actions taken by the public. . . . may not have been effective in consistently getting public to take desired precautions before returning."** ***[1/27/03 EPA IG report]

False implication in IG report that EPA desired citizens to take precautions

The EPA IG report itself is creating a misconception by assuming that EPA had a desire for citizens to take precautions::

> . . . may not have been effective in consistently getting public to take desired precautions before returning.

The written record shows EPA never attempted to get citizens to take any precautions other than the unsafe do-it-yourself NYC DOH guidelines for cleanup for residences and offices. These NYC guidelines state that even dust masks are unnecessary, much less HEPA respirators, for the heaviest layers of WTC dust.

EPA did not advise citizens to use professional abatement or to presume that the dust contained asbestos. This is proven beyond any doubt later in this section.

No need for EPA IG survey on whether citizens did safe cleanup of WTC dust or were adequately informed of the hazards

The EPA IG has no need for any questionnaire on what type of cleaning measures citizens used to clear their homes and offices of WTC dust and debris. The NYC Department of Health (NYC DOH) already conducted this survey. The NYC DOH survey asked if citizens even used the unsafe NYC DOH do-it-yourself guidelines, which do not even recommend dust masks, much less respirators. Less than 40% of apartments that were inhabited in December, 2001 had been cleaned using even these unsafe, ineffective protocols.

Dust and debris from the WTC were ubiquitous in lower Manhattan following the attack. Given the fears regarding safety associated with the debris, it is important to note that only 40% of residents reported their apartments had been cleaned according to the recommended methods of wet mopping hard surface floors and using HEPA vacuums on carpeting. Of those who did not report cleaning properly, 53% said they had received information regarding recommended clean up procedures. Overall, 59% reported receiving information about cleaning procedures. In addition, in households that were not cleaned according to these recommendations, many interviewees reported needing financial assistance and/or physical assistance with cleanup efforts.

. . .

[A Community Needs Assessment of Lower Manhattan Following the World Trade Center Attack, NYC DOH, 12/01, http://www.ci.nyc.ny.us/html/doh/pdf/chw/needs1.pdf]

Early EPA recommendations for cleanup did not even recommend HEPA vacuums

The NYC DOH guidelines for citizen do-it-yourself cleanups did not exist until 9/17/01. Before this date, EPA recommended simple vacuuming, not even mentioning HEPA vacuuming, much less respiratory protection.

Whitman is quoted as saying in her 9/13/01 speech in NYC as recommended the following do-it-yourself cleanup procedures, even after it was announced that some dust samples were over 1% asbestos:

9/14/01

"We're getting in there and testing to make sure things are safe," Whitman says. "Everything will be vacuumed that needs to be, air filters (in area buildings) will be cleaned, we're not going to let anybody into a building that isn't safe. And these buildings will be safe. The president has made it clear that we are to spare no expense on this one, and get this job done."

Of the 24 dust samples the agency took in the first two days of the chaos, many contained asbestos, but only one registered levels above acceptable maximums, says EPA spokesperson Tina Kreisher. That sample, taken from very near the epicenter of the disaster in Manhattan's financial district, contained 4.5% asbestos fibers. . . .

. . .

For the thousands of New Yorkers who lived near the World Trade Center and have been evacuated, Whitman is offering similar advice: Vacuum everything, including air-conditioning filters, and wipe all surfaces with a damp cloth. . . . *[emphasis added]*

. . .

[Newsweek, 9/14/01, Asbestos Alert, by David France and Erika Check, http://msnbc.com/news/629268.asp?0sp=w12b2&cp1=1]

Documentation – EPA only recommended NYC DOH cleanup guidelines

EPA clearly and unambiguously told residents to use the lenient NYC Department of Health (NYC DOH) guidelines for cleanup for all residential and business spaces, and gave no additional recommendations. EPA never told citizens that they should use professional abatement for heavy dust layers, or to presume that WTC dust contained asbestos. EPA never told citizens that the NYC DOH guidelines were meant to apply only to spaces that had been pre-cleaned or tested for asbestos or other toxic substances by landlords.

If EPA had made such recommendations, there would be a record of it. There is not. EPA failed to produce any such documentation in response to a FOIA request. In fact, the record shows that the EPA web site, even to this very day, recommends and links to the exact same 9/17/01 NYC DOH do-it-yourself cleanup guidelines.

Testimony by EPA official states that EPA recommends NYC DOH do-it-yourself cleanup guidelines without any qualifiers

In 11/1/01 testimony before the NYC In the News Before the New York City Council Environmental Protection Committee, Kathleen Callahan, Region 2's Acting Deputy Regional Administrator did in fact recommend that citizens clean up homes and offices using the lenient NYC DOH guidelines, without any disclaimer that over a certain level or whatever, professional abatement should be used. This testimony was posted on the Region 2 website, and still is posted there today.

> 11/1/01
> We do know that some people returning to area homes and businesses are finding dusty environments. If you find that your home or office has dust or debris from the collapse, you should follow the recommendations of the New York City Departments of Health and Environmental Protection on how to clean up properly.
> . . .
> *[Statement of Kathleen Callahan, Acting Deputy Regional Administrator, Region 2, Before the New York City Council Environmental Protection Committee, 11/1/01, http://www.epa.gov/region02/news/speeches/011101k.htm]*

EPA hotline recommends NYC DOH do-it-yourself guidelines, no professional abatement

In response to a Freedom of Information Act (FOIA) from the NY Environmental Law and Justice Project, EPA produced the following two boiler-plate direct communications with citizens who asked how to clean up apartments and offices. Note that both mention the fact that the person requesting the information either lives very near the WTC, and in one instance across the street. Despite this, EPA again recommended using the NYC DOH guidelines. There are no

statements about first making sure that the landlord has done some type of "hazardous materials clearance." There is also no mention of some criteria like "minimal dust" or "assume the presence of asbestos." The one phrase "should the need arise to investigate the requirements for remediation of your residence" in no way is an instruction to use professional abatement or assume asbestos at harmful levels, particularly in light of the extensive press coverage of EPA statements claiming that asbestos was not a problem.

> Good Afternoon, Per our conversation this morning, below is the information we discussed earlier today including web pages to enable you to obtain additional information. Since you work very close to the World Trade Center (WTC), it is important to discuss the effects of both the ambient (outside) and indoor air quality on the health of you and your family. ... presentation made by the Acting Deputy Regional Administrator, Ms. Kathleen Callahan, on November 1st. . . .
>
> Indoor Air Quality (IAQ)
>
> The EPA does not have jurisdiction or oversight of indoor air quality or indoor cleanups. New York City (NYC) has the primary authority and responsibility for re-occupancy of buildings and health issues.
>
> Since you work very close to the WTC it is important that the recommendations of the New York City Department of Health (NYCDOH) and the New York City Department of Environmental Protection (NYCDEP) on how to clean up be followed. ...
>
> The NYCDOH fact sheet on the internet (http://www.ci.nyc.ny.us/html/doh/html/alerts/wtc3.html) contains recommendations for people reoccupying commercial buildings and residents re-entering their homes. Should the need arise to investigate the requirements for remediation of your residence, the NYCDEP has compiled a list of asbestos investigators, remediation contractors and air monitoring firms.
>
> . . .
>
> *[boiler-plate form follow-up letter from Region 2 to residents who inquired. Unknown date, but at least after the 11/1/01 speech by Callahan.]* [6]

> SUBJECT: Response to and EPA Inquiry -
>
> Good Afternoon,
>
> Your e-mail request of October 10 to the US Environmental Protection Agency ... In your e-mail you stated that you are concerned about asbestos levels inside the building where your husband works. Since your husband works across the street from the World Trade Center it is important that the owner/manager of the building follow the cleanup guidelines in the September 16 City of New York Public Notice... In addition, the New York City Department of Health has a fact sheet on the internet (http://www.ci.nyc.ny.us/html/doh/html/alerts/wtc3.html) that contains recommendations for people re-occupying commercial buildings and residents re-entering their homes.
>
> . . .
>
> *[The reference to the 9/16/01 NYC notice says owners need only address "possible contamination" in common areas, and not any "possible contamination" in privately occupied tenant spaces. See Section E of this report for an abstract of the 9/16/01 notice.]*
>
> *[Region 2 response to email, dated at least after 10/10/01]* [7]

EPA website still advises citizens to use the NYC DOH do-it-yourself cleanup guidelines

By 10/3/01, the EPA WTC web pages were instructing citizens to use the NYC DOH do-it-yourself cleanup guidelines, and directly linked to them. At no place on the EPA website did EPA give any qualifications to their recommendation to use the NYC DOH cleanup methods, such as if the dust was heavy, use a professional contractor, or assume that it contains asbestos.

Possibly because of fear of liability, the EPA web site still directs citizens to use the NYC DOH guidelines, and provides a direct link to them. If the facts in a matter are the same before and after, changing course or changing recommendations is suspect, and can provide a basis for litigation. Any deletion of this advice to use the NYC DOH guidelines would be an admission by EPA that the original advice was unsound. Perhaps for the same reasons, the NYC DOH still posts their original 9/17/01 do-it-yourself cleanup guidelines.

On 1/13/02, a major news article appeared in the St. Louis Dispatch, syndicated by more than a hundred other print newspapers, as well as being carried by television. This article noted specifically that the EPA web site was still directing citizens to the grossly inadequate NYC DOH cleanup guidelines. An EPA spokesperson denied that the EPA website directed citizens to the NYC DOH guidelines, and falsely claimed that EPA had removed the recommendation and linkage to the NYC DOH guidelines:

> 1/13/02
> The EPA and the state and city told residents who knew they had asbestos to "mop it up, wash it down and throw it away" and "avoid inhaling dust while doing so."
>
> But throughout the nation, asbestos removal is intensely regulated by state and federal law. The laws, which carry steep penalties, demand that the cleanup be done by personnel wearing special respirators, full head-to-toe protective suits and gloves, and the waste disposed of only at authorized sites.
>
> The EPA and New York health departments point fingers at each other as the source of the misleading information.
>
> Bellow admits that the EPA's web site linked to incorrect guidance for office and apartment landlords and renters.
>
> "It wasn't our information. It was from the (New York) state or city health department, and we removed it from our Web site last month," the spokeswoman said. "Obviously, our asbestos program was overwhelmed by a catastrophe of this magnitude. We are usually only concerned with asbestos from renovations and building demolition."
>
> However, a check of EPA's web Saturday found the same links were being used.
> . . .
> *[emphasis added] ["NY officials underestimate danger" by Andrew Schneider, 1/13/02 St. Louis Post-Dispatch. Updated by the St. Louis Dispatch on its anniversary date, 1/13/03, under a new title, "World trade center attack asbestos health threat" and can be found at www.stltoday.com]*

I was working closely with the reporter who wrote the article above, and was able to correct the misinformation that EPA was telling the journalist. My 1/11/02 memorandum, distributed just prior to the Andrew Schneider article said:

> To this date, EPA still recommends the unsafe and ineffective cleanup recommendations of the NYC Department of Health (NYC DOH). The EPA web page from early October until this present day specifically states that schools, businesses, and residences should be cleaned using the NYC DOH methods. Not only are these methods ineffective, they are also unsafe to those who follow them, as detailed in my December 3 and 19, 2001 memoranda. . . . *[Jenkins' 1/11/02 memo]*

Check it out for yourself. Use the following links described in my 11/15/01 memo to find out that EPA still recommends the NYC DOH cleanup guidelines. EPA cannot claim that it was unaware of my memo, because Region 2 both received and commented publically about the points in this memo.

> The EPA set up web pages to give information on its involvement with the World Trade Center contamination problem and cleanup. These pages direct people to the NYC DOH lenient guidelines instead of the strict EPA national regulations.
>
> Go to the EPA web site page titled "EPA Response to September 11" at:
>
> http://www.epa.gov/epahome/wtc/ *[now at www.epa.gov/wtc]*
>
> Look at the box to the right *[now on the left side]* on the web page which has active links. Look under "Data Tables" and choose the link titled "Asbestos in Bulk Dust." Bring up that page.
>
> You will see a map of Manhattan with green dots *[now the dots are red]* for the different locations where EPA tested for asbestos. Click on any one of the green *[red]* dots. On the page that comes up, you will then see the following statement by the EPA:
>
> > "If dust or debris from the World Trade Center site has entered homes, schools or businesses, it should be cleaned thoroughly and properly following the recommendations of the New York City Department of Health."
>
> An active link is then provided by EPA to the NYC DOH web page which provides their lenient guidelines. This link goes to the following web site:
>
> http://www.ci.nyc.ny.us/html/doh/html/alerts/wtc3.html
> . . . *[Jenkins' 11/15/01 memo]*

In my personal opinion, EPA's IG office should be investigating why EPA denied that they were still directing citizens to use the NYC DOH guidelines through their web site, claiming they had removed the links when they had not.

The FEMA website also still posts nearly identical unsafe cleanup guidelines for citizens.

The FEMA website also still posts its original unsafe do-it-yourself guidelines which are almost identical to those of the NYC DOH. This is the web address: http://www.fema.gov/diz01/d1391n24.shtm .

Like EPA and the NYC DOH, FEMA provides no qualifiers to this do-it-yourself advice, like hiring a professional contractor for more than minimal dust, or assuming the dust contains asbestos. The FEMA website, like EPA's, does announce the voluntary free cleanup for residents, but that is immaterial.

"We recommended professional cleaning for heavy dust" – EPA's 1st defense

EPA has claimed after-the-fact that they had recommended professional abatement whenever there was "more than a minimal amount of dust." This is untrue.

Administrator Whitman's claims that professional abatement was recommended

The following is from a 2/22/02 letter from Administrator Whitman to Congressman Nadler:

> In regard to your concern that EPA guided residents to the New York City Health Department for direction on cleanup of homes, this was appropriate since traditionally, the health agencies make recommendations to the public on health-related issues. Our Agency also advised residents in frequent public appearances, press releases, and phone conversations on our 24-hour hotline, that if they had more than minimal dust they should hire a certified asbestos cleanup contractor. For those with only minimal dust, EPA also continued to recommend wet wiping, mopping, and HEPA vacuuming in these situations, consistent with what the City's recommendations. *[sic]*
> . . .
> *[letter, 2/22/02, from EPA Administrator Whitman to US Representative Jerrold Nadler, posted on the NY Environmental Law and Justice website at www.NYenviroLAW.org]*

Whitman's claims are easy to disprove, because she said that there were press releases, frequent public appearances, and phone conversations. EPA maintains an archive of all press releases from both Headquarters and the Regions at www.epa.gov. Although there are many press releases concerning the WTC, none recommend professional abatement. If EPA really did advise the public this through frequent public appearances, then there should be some quotations to that effect in the press. There are not.

And, EPA's 24-hour hotline definitely did not advise citizens to use professional abatement. Earlier in this section, quotations are given of what EPA was actually advising citizens through its

hotline. This was the information that EPA itself provided in response to a FOIA which had requested documentation of any advice to the public on cleaning. This advice said nothing about professional abatement. However, the hotline advice did recommend using the NYC DOH do-it-yourself guidelines, even for someone who lived across the street from Ground Zero.

EPA had no trouble getting any message it wanted heard and covered by the press. For example, EPA did recommend that rescue workers at Ground Zero wear respirators, even though EPA is not OSHA and did not have regulatory authority over the rescue workers. There were many press articles quoting EPA recommending respirators for the rescue workers. But there are no press articles recommending that citizens use professional abatement, except for the one found from 12/8/01, recommending it only for dust thick enough to be measured with a ruler.

Testimony by EPA's Callahan on 11/1/01 certifies that EPA only recommended the NYC DOH do-it-yourself cleanup guidelines, followed by 11/26/01 reversal claiming EPA in past had recommended professional abatement

In 11/1/01 testimony before the New York City Council Environmental Protection Committee, Kathleen Callahan, Region 2's Acting Deputy Regional Administrator recommended only the unsafe NYC DOH do-it-yourself cleanup guidelines. There were no qualifiers, such as for heavy layers of WTC dust, professional abatement should be used. This testimony is still posted on the Region 2 website.

> 11/1/01
> We do know that some people returning to area homes and businesses are finding dusty environments. If you find that your home or office has dust or debris from the collapse, you should follow the recommendations of the New York City Departments of Health and Environmental Protection on how to clean up properly.
> . . .
> *[Statement of Kathleen Callahan, Acting Deputy Regional Administrator, Region 2, Before the New York City Council Environmental Protection Committee, 11/1/01, http://www.epa.gov/region02/news/speeches/011101k.htm]*

On 11/26/01, Callahan again said to follow the NYC DOH guidelines in her testimony. However, this time, she claimed that EPA was giving this advice only for "minimal dust." Callahan testified as follows:

> 11/26/01
> I want to briefly address a piece in the *Daily News* last week *[Feds, City Ignore Asbestos Cleanup Rules, Says EPA Vet, by Juan Gonzales, 11/20/01, New York Daily News]* , which cited a scientist from our Washington, D.C. office *[Cate Jenkins, Ph.D.]* who independently wrote a memo asserting that EPA asbestos regulations apply to the cleaning of apartments and asserted that EPA waived these regulations. EPA strongly disagrees. . . . For apartments with a minimal amount of dust, EPA has recommended that people follow New York City Department of Health guidelines for cleaning. These

> guidelines involve using a HEPA vacuum and a damp cloth to remove the dust. EPA has recommended that dust masks be worn during cleaning.
> . . .
> *[Testimony of Kathleen Callahan, Acting Deputy Regional Administrator U.S. Environmental Protection Agency, Before the New York State Assembly, 11/26/01]* [8]

This claim by Callahan that EPA was recommending professional abatement is specious for the many reasons:

a. As discussed earlier, there is no evidence in the record that EPA gave that advice.

b. Her change in testimony never translated into fact, into any actual warnings to the public to use professional abatement after her 11/26/01 testimony.

c. Her 11/1/01 testimony that did not recommend professional abatement was posted on the EPA web site. However, her 11/26/01 testimony claiming that EPA recommended professional abatement was not posted on the web site. EPA did not want that advice by way of testimony widely distributed.

d. The 11/26/01 testimony of Callahan appears to have changed over her 11/1/01 testimony solely as the result of criticism the scientist she mentions, myself. Callahan refers to me in the same paragraph where she claims that EPA had always been recommending professional abatement for heavy WTC dust. My 11/15/01 memo and the 11/20/01 press coverage of my memo[9] was very critical of EPA's recommendations of the NYC DOH do-it-yourself cleanup methods. Callahan's testimony was only an attempt to refute the press resulting from this memorandum.

<u>In 1/02 FOIA response, EPA could produce no documentation of any recommendations for professional cleaning</u>

On 1/3/02, the New York Law and Environmental Justice Project submitted a Freedom of Information Act (FOIA) request explicitly asking for any documentation that EPA recommended professional cleaning. The FOIA requested the following:

> Please provide all documents providing such recommendations or relating to EPA Region II recommendations to citizens on the use of professional asbestos abatement contractors for the cleanup of buildings in Lower Manhattan.
>
> Please provide all documents defining what is meant by a "light dusting" from the fallout from the collapse of the World Trade Towers. . . .

The documents provided in response to the FOIA show just the opposite.

The only document even hinting at a recommendation for professional asbestos document was an internal draft. The draft did advise to the public to use professional abatement, but obviously it was never finalized and actually given to the public. If it had been finalized, a copy of it would been available, and EPA would have produced it as part of the other documents it supplied with its FOIA response. Furthermore, there would be evidence that EPA had given it to citizens, such as a referral to it in press release or posting on the EPA web site.

There was another document supplied by EPA in response to the FOIA which referred to advising the public to use professional abatement. However, it was only an internal draft EPA document that merely claimed that EPA had recommended professional abatement for significant WTC dust layers. This document did not constitute actual advice to the public.

> We have further advised people to use professional asbestos abatement contractors to carry out cleaning wherever there is more than a minimal amount of dust.
> . . .
> *[DRAFT: November 27, 2001, ATTORNEY WORK PRODUCT, ATTORNEY-CLIENT COMMUNICATION, by Walter Mugdan, EPA Region 2 Counsel]*

NYC DOH was delegated by EPA to advise citizens

Remember that EPA had delegated the cleanup of interior spaces to the NYC DEP and DOH. The NYC DOH was the particular entity who was active in advising citizens of what they should be doing about indoor air and indoor cleaning. EPA says as much many times. The following is a quote from Administrator Whitman. Also see Section V on the use of the National Contingency Plan and EPA's delegation of indoor issues to NYC.

> 2/22/02
> In regard to your concern that EPA guided residents to the New York City Health Department for direction on cleanup of homes, this was appropriate since traditionally, the health agencies make recommendations to the public on health-related issues.
> . . .
> *[letter, 2/22/02, from EPA Administrator Whitman to US Representative Jerrold Nadler, posted on the NY Environmental Law and Justice website at www.NYenviroLAW.org]*

As reviewed in another part of this section, the NYC DOH issued several press releases directed at citizens. These press releases said to follow the NYC DOH do-it-yourself guidelines. I am told that the NYC DOH distributed large quantities of these press releases to the affected buildings in lower Manhattan for building managers to distribute. (I am also told that in least one case, the flyers were not distributed to tenants.) None of these NYC DOH press releases (or the cleanup guidelines themselves) mentioned professional abatement for heavy WTC dust accumulations, or even the word asbestos in most cases. Extensive excerpts of these NYC DOH documents are given later in this section.

These NYC DOH press releases are still posted on the NYC website. EPA claims that it also issued press releases aimed at citizens, advising them to use professional abatement for heavy WTC dust. However, there are no press releases on the EPA website that make any such statements.

It is absurd for EPA to now claim that it intervened and advised citizens to clean up in any way that differed from the NYC DOH.

NYC DOH officials deny that EPA ever recommended professional cleaning

In May, 2002, long after the time citizens had already cleaned up, EPA made statements in an Associated Press article claiming that it had recommended professional cleaning earlier. However, the Assistant Commissioner of the New York City Department of Health, Jessica Leighton, disputed EPA's claim:

> But EPA officials say they also warned residents and cleaning companies that they should presume the dust had asbestos levels high enough to require professional contractors with respirators to clean up heavy deposits. "We knew that there was asbestos in the dust and the recommendation was to use professional abatement contractors," agency spokeswoman Bonnie Bellow said.
>
> "I never heard EPA say that," said Jessica Leighton, assistant commissioner of the New York City Department of Health. "It was not the assumption we're working under."
>
> Instead, the city said as early as Sept. 17 that residents could clean their own apartments using wet rags, mops, and high-efficiency vacuum cleaners.
>
> Leighton said that recommendation applied only to buildings where landlords had not detected enough asbestos to require professional cleaning.
>
> But that qualification wasn't mentioned on many Health Department press releases and fliers posted on downtown buildings.
>
> "At the time when people were starting to get back into their homes, it was unclear," she said.
>
> "There was no leadership from the city, state, or federal government on this." Artist Nancy Manter said she is recovering from pneumonia she developed after cleaning inches of dust from her apartment two blocks from Ground Zero.
>
> "Cancer, of course, is a huge concern," she said. "You feel like you're not being told the truth."
>
> . . .
>
> *[AP, 5/19/02 - Dust may not settle for years over cleanup, by MICHAEL WEISSENSTEIN]*

What is interesting is the fact that the NY Times reports that this same NYC DOH assistant commissioner also cleaned her own apartment with paper towels. It would be interesting to find out whether Ms. Leighton later had her apartment professionally abated, either under the free EPA cleanup program or otherwise, or whether she had her apartment tested, either by EPA or a private firm. If she did, then she would have been doing much more than her employer, the NYC DOH, had recommended to other citizens of NYC.

> Beth Kaltman, 22, a model, cleaned her own apartment using paper towels. So did Dr. Jessica Leighton, an assistant commissioner of risk and environmental communication at the New York City Department of Health.
> . . .
> *[February 8, 2002, With Uncertainty Filling the Air, 9/11 Health Risks Are Debated, By KIRK JOHNSON, 2/8/02, NY Times]*

EPA did not take advantage of American Lung Association program that handed out the NYC DOH do-it-yourself cleanup guidelines, gloves and non-HEPA masks to citizens

The American Lung Association (ALA) made an announcement that it would be distributing copies of the NYC DOH do-it-yourself cleanup guidelines, along with latex gloves and non-HEPA masks to 10,000 citizens in lower Manhattan. EPA would have been well aware of this effort through the AP article below. However, EPA made no attempt to intervene or participate and ask that the ALA also distribute the mythical EPA advice to use professional abatement for heavy dust.

> The American Lung Association announced Wednesday it will distribute more than 10,000 cleanup kits to help people in areas near the ruins of the World Trade Center return safely to their homes.
>
> "Going home is a fundamental step in the healing process," said Cindy Erickson, chief executive officer of the American Lung Association of New York. "Hopefully, when armed with information and tools, these New Yorkers will be ready to rebuild and resume their lives."
>
> Each "Operation Return Home" kit will include recommendations from the city Department of Health regarding how to clean apartments affected by the Sept. 11 destruction of the Trade Center as well as a dust mask and a pair of latex gloves for cleaning.
> . . .
> *[Associated Press, American Lung Association To Distribute Cleanup Kits For Residents Near The WTC, 9/26/01, http://abclocal.go.com/wabc/news/WABC_092601_cleanupkits.html]*

As an aside, the American Lung Association has aggressively parroted both the NYC and EPA official line that there are no long term hazards from WTC fallout. The following is a quotation from 9/26/01, saying that residents who even wear dust masks near Ground Zero, much less

respirators, are "self indulgent."

> Some experts are convinced the ash presents no long-term health hazards to citizens. Louise Leavitt of the American Lung Association's New York office feels that residents walking around with dust masks are being a little self-indulgent. 'It may make them feel better but it's not necessary or even recommended.'
> . . .
> *[emphasis added] [Uneasy breathing, As the dust settles in New York, concerns linger about health risks in the air, 9/26/01, By Francesca Lyman, MSNBC, www.msnbc.com]*

Cost of professional abatement prohibitive, even if EPA or NYC DOH advised it

Even if a citizen wanted to use professional abatement, the cost was too high for many. See the press articles below, as well as the many stories in Section F about citizens performing do-it-yourself cleanups.

> FEMA's acting regional director, Joseph F. Picciano, said the federal government would foot the entire bill for the newly announced cleanup, but he declined to estimate the total cost. "There is no cap set on this," he said. New York's Mr. Ward estimated that the average cost for a two-bedroom apartment would be $3,000 to $5,000. He said the process would take two to three days.
> . . .
> *[AFTERMATH OF TERROR, Bureaucratic Buck-Passing Delayed Asbestos Cleanup After 9/11 Attacks, By JIM CARLTON, 5/9/02, THE WALL STREET JOURNAL]*
>
> _____
>
> Many renters were forced to remove the dust themselves because they didn't have enough insurance to hire a professional. Rep. Jerrold Nadler (D-Manhattan), whose district includes Ground Zero, said the Lower Manhattan Development Corp. should make sure there is a testing and cleanup program in place.
>
> Nadler said the federal government should pick up the tab and estimated that it would cost about $10,000 to professionally clean the average contaminated apartment.
> . . .
> *[Agency May Gauge Indoor Air Downtown, By GREG GITTRICH, NY Daily News, 2/22/02]*
>
> _____
>
> A number of companies clean textiles. . . . charges a minimum of $125 a visit, $2.50 a square foot to clean Oriental carpets and $25 a linear foot for upholstered furniture; there is a surcharge of up to 50 percent for construction-related dust. . . . hand washes delicate and antique fabrics; figure that it will cost about $400 to clean a queen-size quilt. Services that specialize in disaster cleanups use refrigerator-size air cleaners and industrial rubber sponges that trap soot. Maxons Restorations (212-447 6767) estimates that it could finish a 3,000-square-foot loft in three days, with a team of six to 10 employees in masks and goggles; work would include cleaning electronics, artwork, area

> rugs, curtains and clothes off site, which would take several weeks. Total cost: $5,000 to $10,000.
> . . .
> *[Cleanup Specialists, 9/20/01, NY Times]*

Isolated 12/8/01 EPA advice for professional abatement, but only for "dust you can measure with a ruler"

The following is a statement by EPA in a 12/8/01 United Press International story. This is the only written documentation obtained of EPA directly communicating with any citizen that professional abatement should be used from the day of the disaster to the end of the year 2001.

However, EPA said that only dust layers that were thick enough to be measured with a ruler needed professional cleaning. This is very unsafe advice, and contradicts EPA's current guidelines for when to use highly skilled full protective abatement for EPA's voluntary NYC cleanup program. Furthermore, this 12/8/01 EPA statement came long after most NYC citizens had already performed the NYC DOH do-it-yourself cleanup, much to late to be effective.

> 12/8/01
> Although the Environmental Protection Administration in Washington has issued a number of statements saying hazards were low, EPA Region II spokeswoman Mary Helen Cervantes said, "We recommend that if there is more than a minimal amount of dust in an apartment, and this is subjective, but if you can put a ruler in it, a professional contractor should be called to remove it." For minimal amounts of dust the EPA recommends following the city Health Department guidelines.
> . . .
> *[emphasis added. UPI - 12/8/01 -WTC dust makes some ill, by Alex Cukan]*

There is no alternative definition on the EPA website or elsewhere for either "minimal dusting" or "light dusting" of WTC fallout. EPA has not been able to produce any other criteria for what it considers to be "minimal dust," even when required to do so by a FOIA request.[10]

Later after-the-fact EPA press statements claiming professional abatement recommended

As discussed earlier, on 1/3/01, the NY Environmental Law and Justice Project requested that EPA supply all documentation that it had advised citizens to use professional abatement for more than minimal layers of WTC dust. This probably put EPA on the defensive.

In a 1/12/01 press statement, EPA claimed it had been recommending all along that citizens have their spaces professionally cleaned. As seen above, there was no evidence to support this claim. This press statement cannot be construed as actual advice to the public to use professional abatement. This is because it came so long after citizens were already back in their offices and

apartments, having already performed unsafe do-it-yourself cleanups.

> 1/12/01
> Environmental Protection Agency brass found themselves sharply at odds yesterday with the agency's proposed investigation into charges that the EPA concealed evidence of dangerous contamination at the World Trade Center disaster site.
> . . .
> At issue were assurances from EPA chief Christie Whitman and other agency officials that environmental conditions at the site were safe ev en as agency tests showed dangerous warning signs.
> . . .
> An EPA spokeswoman shot back that Whitman never said the area was without risk. "That's a mischaracterization of what was ever said," said agency spokeswoman Bonnie Bellow. Whitman advised rescue workers to wear respirators and people returning to homes and offices in the area to hire contractors to remove asbestos, Bellow said.
>
> Much of the dispute has centered on the release in late October of data from earlier EPA samples that showed elevated levels of dioxins, PCBs, lead and chromium. PCBs are toxic chemical compounds believed to cause skin diseases, birth defects and cancer.
> . . .
> *[1/12/02, Battle Over EPA Denials Of Dangers Downtown, NY Daily News, By RUSS BUETTNER]*

The following is another isolated, long after the fact claim that EPA had always been recommending professional cleaning.

> 2/7/02
> "We have from the start been clear that what we found on the outside was likely to have gotten inside people's apartments," Bellow says. "And if people were returning to dusty offices and homes, they could assume that that material was asbestos-containing and that they needed to get that material cleaned up using professional contractors."
> . . .
> *[USA Today, Cherrise Jones, 2/7/02, ANXIETIES OVER TOXINS RISE AT GROUNG ZERO, http://www.ban.org/ban_news/anxieties_over.html]*

After the 2/11/02 US Senate hearing on indoor air, Mayor Bloomberg made a half-hearted statement recommending professional cleaning of apartments. But this came only after EPA had agreed to address the issue. This advice also was offered after most residents had already completed their own cleaning.

> 2/22/02
> Mayor Bloomberg said there was little cause for worry.
>
> "If you have an apartment down there that has not been cleaned, common sense says you should have it cleaned professionally before you move in," he said. "But the air quality is safe in downtown Manhattan."
> . . .
> Many renters were forced to remove the dust themselves because they didn't have

> enough insurance to hire a professional. Rep. Jerrold Nadler (D-Manhattan), whose district includes Ground Zero, said the Lower Manhattan Development Corp. should make sure there is a testing and cleanup program in place.
> . . .
> *[Agency May Gauge Indoor Air Downtown, By GREG GITTRICH, NY Daily News, 2/22/02]*

"We said to presume the dust contains asbestos" – EPA's 2nd defense

In a draft document dated 11/27/01 EPA claimed that it advised the public to presume that any WTC dust contained asbestos:

> We have advised people that if they have WTC dust in their homes or offices, it may be easiest for them to simply assume that it meets EPA's definition for "asbestos containing material" (ACM), rather than paying to test each dusted area separately and awaiting the results before taking any further action. (EPA's Clean Air Act regulations material is asbestos-containing if it is found to have more than 1% of asbestos content.) We have been giving this advice because about one third of the WTC bulk dust samples (*not* ambient air samples) that we analyzed did meet EPA's definition for ACM that i s, they had more than 1% asbestos in the sample of dust.
> . . . *[DRAFT: November 27, 2001, ATTORNEY WORK PRODUCT, ATTORNEY-CLIENT COMMUNICATION, signed by Walter Mugdan, EPA Region 2 Counsel]* [11]

There is no evidence or documents to support EPA's claim that it instructed or advised citizens in any way to assume that WTC dust contained asbestos, and thus should be handled as a hazardous material. The same 1/3/02 FOIA request discussed earlier in this section not only requested documentation of EPA's claim that it advised citizens to use professional abatement, it also required EPA to produce any documentation that it had advised citizens to presume that any dusts in their homes and offices "contained asbestos" pursuant to EPA regulations for "Asbestos Containing Materials (ACM)" under the CAA NESHAP. EPA was unable to produce any such documents.

There are no statements by EPA in any press articles, and there is nothing in any of EPA's press releases from either Headquarters or Region 2 remotely referring to advice to presume WTC dust contained asbestos.

In addition, the NYC DOH never said "presume asbestos containing," and furthermore never mentioned the "A" word at all in advisories and press releases

Remember that EPA delegated interior spaces to New York authorities. Since EPA did not say anything to the public about assuming there was asbestos, did the NYC DOH? No, they did not. They instead had their do-it-yourself cleanup standards which did not even mention asbestos. In

addition, the NYC DOH issued at least 3 other fact sheets to residents that did not even mention the word asbestos. Instead, the NYC DOH just used the word "dust." In one place, it said it might be good to get professional cleaning "help" (not abatement) if the person felt "uncomfortable" cleaning up (but not for the purpose of preventing health risks). These NYC DOH press releases are given later in this section, along with the NYC DOH do-it-yourself cleanup guidelines themselves.

"There were hazardous material clearance certification before re-occupancy" – EPA's 3rd defense for recommending NYC DOH's do-it-yourself guidelines

EPA proffered a third story to justify its recommendations to use the NYC DOH cleanup guidelines. EPA claimed that its referral to the NYC DOH guidelines was meant only to apply "*after* the building owners certify that the building is safe to re-occupy" and "building owners have already addressed the asbestos issues." This is untrue.

> Some of these questions have been raised in a memorandum written by a Dr. Cate Jenkins, an environmental scientist employed in the Office of Solid Waste in EPA's Washington Headquarters. Dr. Jenkins makes two major assertions: . . . (2) that EPA has not given appropriate advice to those who live and work in downtown Manhattan with respect to cleaning dust from their homes or offices.
>
> . . .
>
> In evaluating the NYCDOH guidelines it is important to understand their express purpose, and to understand the parallel role of another City agency, the NYCDEP. DEP has been the agency responsible for providing guidance to landlords and managers of buildings affected by WTC dust. Like EPA, DEP has advised such persons to use professional asbestos contractors; indeed, DEP provides a list of certified asbestos contractors on its web site. By contrast, the DOH guidelines which Dr. Jenkins attacks explicitly state that they provide information to building occupants concerning what cleaning they may want to consider *after* the building owners certify that the building is safe to re-occupy. In other words, these guidelines assume that the building owners have already addressed the asbestos issues.
>
> . . .
>
> *[DRAFT: November 27, 2001, ATTORNEY WORK PRODUCT, ATTORNEY-CLIENT COMMUNICATION, signed by Walter Mugdan, EPA Region 2 Counsel]* [12]

NYC DOH did not require hazardous material certifications or even cleanups or testing

The NYC DOH guidelines contain no requirements for landlords to test, clean, or certify that there are no hazardous materials present in rented spaces like apartments and offices. They only say that the landlords themselves need to have approved the building for re-occupancy, by some unknown process. See the language in NYC DOH guidelines below. (A longer version of the NYC DOH guidelines are given later in this section.)

9/17/01
Recommendations for People Re-Occupying Commercial Buildings and Residents Re-Entering Their Homes

What steps should I take upon returning to my workplace or home?

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.
. . .
[http://www.ci.nyc.ny.us/html/doh/html/alerts/wtc3.html]

The NYC DOH re-occupancy guidelines issued on 9/22/01 say absolutely nothing about prior cleaning or testing. The only criteria for certification are structural integrity, electricity, water, and air conditioning.

9/22/01
NYC HEALTH DEPARTMENT DISTRIBUTES HEALTH RECOMMENDATIONS FOR RESIDENTIAL AND COMMERCIAL REOCCUPATION

Over the course of the past few days, New York City Department of Health (DOH) has been distributing health recommendations to tenants and business owners in Manhattan below Canal Street who are now able to re-enter their apartments and office buildings.
. . .
New York City Health Commissioner Neal L. Cohen, M.D., said "The Health Department is continuing to work with federal, state, and local agencies to assess the safety of neighborhoods affected by the collapse of the World Trade Center buildings. While there are no significant adverse health risks to the general public, residents and business owners who are allowed to return to their buildings should follow Health Department recommendations to minimize exposure to dust and other particulate matter that may cause throat and eye irritation. All residents and business owners should check with their building managers or owners to make sure that their buildings are safe, and have been certified for re-occupancy."
. . .
Residents should check with building managers and/or owners to make sure that their buildings have been assessed and certified safe by the City of New York. This includes structural stability; and the safe operation of gas, electrical, water, steam service, heating, ventilation, and air conditioning systems.
. . .
[NYC DOH, 9/22/01, press release, http://www.ci.nyc.ny.us/html/doh/html/public/press01/pr84-922.html]

NYC DEP 9/16/01 voluntary instructions to building owners on asbestos only applied to exterior and common areas

The NYC DEP issued a 9/16/01 notice to building owners that they should use their own judgement, but when hazardous materials like asbestos were suspected to be present, to utilize qualified personnel. However, this directive only applied to the exterior and common areas of the buildings, not to apartments and offices.

> 10/25/01
> EPA is using the 1% definition in evaluation exterior dust samples in the Lower Manhattan area near the World Trade Center. All affected landlords have been instructed to test dust samples within their buildings utilizing this standard. Landlords were notified that they should not reopen any building until a competent professional had properly inspected their premise. If more than 1% asbestos was found and testing and cleaning was necessary, it had to be performed by the certified personnel.
> . . .
> *[Joel A. Miele, Sr., P.E. Commissioner, NYC Dept. of Environmental Protection, letter to Residents of Lower Manhattan, 10/25/01]*
>
> _____
>
> 10/25/01
> EPA is requiring the strictest protective standard under AHERA, the Asbestos Hazard Emergency Response Act, for asbestos in outdoor and indoor areas. (This standard is used to determine whether children may reenter a school building after asbestos has been removed or abated.) To be as protective as possible, EPA, together with the NYCDEP and all the other health and environmental agencies, are requiring school reentry standards in tests around the World Trade Center site. NYCDEP, USEPA, and NYC Department of Sanitation worked with the Battery Park City Authority and owners of area buildings to perform cleanups of all dust in exterior areas with HEPA vacuums and wetwashing. NYCDEP and EPA have both conducted tests in exterior spaces and all exterior areas of Battery Park City passed their strict protective standards before being opened again to the public. *[emphasis added]*
>
> EPA is using the 1% definition in evaluation exterior dust samples in the Lower Manhattan area near the World Trade Center. All affected landlords have been instructed to test dust samples within their buildings utilizing this standard. All Battery Park City landlords were notified that they should not reopen any building until a competent professional had properly inspected their premise. If more than 1% asbestos was found and testing and cleaning was necessary, it had to be performed by the certified personnel. *[emphasis in the original]*
> . . .
> *[letter from NYC DEP Commissioner Meile to residents of Battery Park City]*
>
> _____
>
> 9/16/01
> Notice to Building Owners Located South of 14th Street, Manhattan Building

> Maintenance Issues Involved in Reopening Buildings Closed Since 9/11/01
>
> Air Circulation Systems: Building owners are advised that air circulation systems not operated since Tuesday must have their filters replaced before the system is restarted. Systems should be run on a recirculated air setting and not on fresh air, if possible, until the WTC fire is extinguished.
>
> Asbestos or other Hazardous Materials situations: Owners/managers should have possible contamination problems, indoors or at roofs, reviewed by competent professionals (i.e., R.A.s, P.E.s, Asbestos Inspectors, etc.) prior to beginning clean-up of buildings with maintenance personnel. Where no problems are noted, proceed with clean-up. Where problems (i.e., HazMat) are noted, contact DEP as indicated below.
>
> All issues regarding air asbestos and/or hazardous material clean-up should be directed to the Department of Environmental Protection's complaint center at 1-718 DEP-HELP (337-4357). Help center operators will refer your call to Asbestos and Hazardous Materials staff from 8:00 a.m. to 8:00 p.m. every day including weekends until such time as the Mayor's office declares the emergency over. Staff will review each case individually on the telephone and verbally approve clean-up activities--paperwork to follow. Emergency situations which arise outside of these time frames will be handled by help center staff taking down the caller's name and contact phone number and notifying personnel on stand-by who will then contact the caller directly.
> . . .
> *[THE CITY OF NEW YORK Department of Environmental Protection, PUBLIC NOTICE, 9/16/01, http://www.nyc.gov/html/doh/pdf/alerts/dust.pdf]*

The fact that these instructions only applied to common areas and the exteriors of buildings was made clear in a letter that the NYC DEP sent to landlords during the period of February to May of 2002:

> Dear Sir/Madam:
>
> In September 2001, the New York City Department and Environmental Protection *[sic, which means this is an actual reproduction of the original; the word "and" is actually in the letter, and not "of".]* (NYC DEP) and the Department of Health (NYC DOH) advised building owners regarding building maintenance and re-occupancy issues following the collapse of the World Trade Center. The steps included the professional assessment of building contamination for possible hazardous components, including asbestos, and a retrospective filing, as required, if applicable.
>
> The NYC DEP is hereby requesting copies of the environmental hazard assessments including bulk sampling results and air monitoring results and a summary of clean-up activities at the above referenced site. Please forward the requested documents to our offices within FIVE BUSINESS DAYS. . . .
>
> Please be advised buildings owners are responsible for the cleaning of building exteriors, grounds, and common areas. Adherence to proper cleaning methods is important for the protection of public health and the environment.
>
> Sincerely, R. Radhakrishnan, P.E., Director, Asbestos Control Program.

[Date: 5/02, Letter made available by the NY Environmental Law and Justice Project]

Whether the NYC DEP had any legal authority to require a response to their letter, or even to do any asbestos or other hazardous material evaluation, one thing is made abundantly clear:

NYC DEP SAYS THAT LANDLORDS ONLY NEEDED TO CLEAN COMMON AREAS, AND NO HAZARDOUS MATERIAL ASSESSMENT WAS REQUIRED

NYC DEP did not inspect or enforce cleanups of even common areas or exteriors

Note the careful wording in the letter above. There was no reference to any asbestos regulations. Instead, only a general duty clause was cited, that building owners were responsible for cleaning exteriors and common areas. There was no reference to asbestos or any other hazardous materials regulations, even though the NYC Director of Asbestos Control signed the letter.

If there were any legal authority, it would have cited clearly, as we do, and are required to do, in all correspondence from EPA requesting information. Included in the references is a copy of a typical letter that my division here at EPA would send to a facility requesting information.[13] This is the type of language necessary to illicit a response, where all legal authorities are cited.

The NYC DEP commissioner, Joel Meile, admitted that his department had taken no enforcement action in testimony on 2/11/02.

> Commissioner Miele went on to say that although the City had taken the lead on indoor air, it actually placed the burden for testing and remediating indoor common spaces on the landlords and property owners. The City has made very little effort to ensure that such testing or remediation actually took place, other than issuing one "public notice" on the subject. The issue of DEP enforcement of building owner's responsibility for common areas caused a great deal of stir at the Senate Subcommittee hearing when Commissioner Miele first stated on the record that his agency had enforced the law, and then, after being heckled, admitted that it had not:
>
> > Senator [Joseph] Lieberman: You're saying that every building was tested, every building had its indoor air tested before people were allowed to go back in?
> >
> > Dr. Miele: That's the city regulation. That's correct. sir. [Interruption from audience.]
> >
> > [Senator Lieberman questioned another witness for a moment.]
> >
> > Senator [Hillary Rodham] Clinton: . . .we had some vocal audience member who responded when you said that's city regulation. Can you sit there today and tell us that every landlord and every building complied with the city regulations?

> Dr. Miele: No, I can't tell you that. But the reason for the that, in large measure, has been the fact that we've let people back into buildings, that is to clean up the buildings, and then when we're comfortable that they've got the tests, let people back in. One of the things we did to try and facilitate it was to let people get back in when we were comfortable that they had cleaned up the buildings but before they had submitted the formal permit application to us and gotten the permits from us.

A September 22, 2002 DOH press release confirms that while the City required that buildings be certified for issues such as "structural stability," no such certification was required for environmental safety. The only record of any enforcement of common space testing and remediation seen to date is a letter sent by DEP to building owners the day after the Senate hearing, requesting documentation of cleanup measures taken. Moreover, that letter informed the landlords and property owners that they are only responsible for common or public areas of buildings. And, according to some experts, the type of testing that DEP instructed building owners and managers to use would not properly detect the hazardous materials.

. . .

[U.S. CONGRESSMAN JERROLD NADLER, WHITE PAPER, LOWER MANHATTAN AIR QUALITY, Last Updated, April 12, 2002, http://www.nyenvirolaw.org/PDF/EPA%20White%20Paper%20Final%204_121.pdf or http://www.911digitalarchive.org/objects/112.pdf]

The loudest reaction came when Joel Miele, commissioner of the New York City Department of Environmental Protection, said that landlords in Lower Manhattan were required to measure contaminants inside apartments and to clean them if the levels were dangerously high. But he acknowledged that his department does not confirm that the landlords are complying.

. . .

[Concerns intensify on ground zero dust, By Fred Kaplan, Boston Globe, 2/12/2002]

The city took jurisdiction over indoor cleanup of residences and offices affected by the World Trade Center fallout under a disaster plan coordinated by the Federal Emergency Management Agency. The EPA took responsibility for cleaning and testing outdoor areas under the same plan.

But the setup was criticized almost from the outset. For example, EPA Administrator Christine Todd Whitman drew fire when she asserted only a week after the attacks that the air and water around Ground Zero were safe. Yet tests afterward continued to show asbestos in rooftop debris and other exterior places which testing experts say could provide new sources of contamination. Apartment and condo residents also complained of coughing, wheezing and other irritations, which medical experts have said were likely linked to their exposure to fiberglass and other airborne particulates still inside buildings. Asbestos symptoms take years to develop and can lead to asbestosis and other deadly diseases.

Meanwhile, many residents have complained the city has done little to make sure landlords clean their buildings. Joel Miele, commissioner of New York's Department of

> Environmental Protection, admitted as much under questioning before a Feb. 11 hearing convened by Democrat Sens. Hillary Rodham Clinton of New York and Joe Lieberman of Connecticut. In response to a question from Sen. Clinton whether he could say every landlord and building had complied with the city's cleanup regulations, Mr. Miele responded, "No, I can't tell you that."
> . . .
> *[EPA, in Reversal, to Test Homes In Lower Manhattan for Asbestos By JIM CARLTON, 5/8/02, THE WALL STREET JOURNAL]*

On 2/10/03, US Representative Nadler issued a press release documenting that the NYC DEP had not received many responses to their letters to landlords asking about their abatement procedures:

> DEP sent an official request for environmental quality information from building owners and managers in February 2002.
> . . .
> However, Rep. Nadler announced that the results of a Freedom of Information Law (FOIL) request submitted by Joel Kupferman of the New York Environmental Law & Justice Project show that as of last month, DEP only possesses data from 218 downtown buildings. That is out of a total of approximately 1900 buildings -- little more than 11%. They are all below Canal, Pike and Allen Streets -- the same arbitrary boundary used by EPA for its residential cleanup plan. Many of these responses are incomplete or inadequate. For building owners or managers that did not respond, DEP has not issued a single citation.
> . . .
> *[NYC WORKFORCE MAY FACE SERIOUS HEALTH RISK, 2/10/03, Press Release, Representative Jerrold Nadler, http://www.house.gov/nadler/EPA_021003.htm]*

The question that has not been asked is whether the NYC DOH or NYC DEP had any legal authority to force landlord cleanups specifically for hazardous materials after 9/11. This might be a good subject for a Freedom of Law request. The NCP gives the federal government the authority to do cleanups, even forced cleanups inside buildings, as discussed in Section V of this report.

Stories of re-occupy a buildings supposedly "cleared" by NYC officials

The following are accounts of citizens who re-occupied buildings after they had gone through all NYC clearance processes.

> 2/11/02
> I live 150 yards from Ground Zero . . . I saw the plane before it hit. Our building was evacuated. It was 8 days before we knew that it was structurally sound, another few weeks before we were assured that 1 Liberty wouldn't topple on us. .. It was after the City recertified our building for reoccupancy about 6 weeks after the attack . . . From a health perspective, there has been little guidance and fewer answers.
>
> When I first returned to our apartment, I just sat down and cried. It was a mess and we

spent 2 hours cleaning it not the dust that covered everything, thinly in some places, like when the butler in English movies goes upstairs and reopens the ballroom that has been closed for 10 years, and thickly in others, like a blanket but the French toast that had been sitting on the table since my husband and son had hurriedly left 2 weeks before. It didn't occur to us to wear masks or take off our shoes. We just needed to straighten up. Recall, in this regard, that it is the City's job to certify for structural integrity, not for environmental safety; I knew this, but didn't quite get what it meant until later.

We then began the great education process which has made downtown residents experts in products and services we never knew existed: FEMA, HEPA, OSHA. We all learned fairly quickly which were the best cleaning companies and scientific testers, but what no one, to this day, can agree on is what clean means and how to measure it.

. . .

[Testimony of Elizabeth H. Berger, Before the United States Senate Committee on Environment and Public Works, Sub-Committee on Clean Air, Wetlands and Climate Change. 2/11/02]

11/8/01

My name is Diane Lapson. I am a Vice President of the Independence Plaza tenant association. . . . Independence Plaza is located on Greenwich Street, about five blocks uptown from Ground Zero. . . . All of the tenants of one of our buildings were evacuated. *[around 6000 tenants in building complex]* Many seniors wound up frightened in shelters

. . .

For the past two months we have spent stressed out days, sleepless nights, because of the steel cement and whatever is attached to them, is carted to the pier alongside our buildings and dropped with the force of the most violent thunder sound you can imagine . . . the use of cheap tarp tears and are discarded and the debris has not been covered. Furthermore, the debris often has been smoking, spreading toxins into our neighborhood over and over again . . . we're having our own problems trying to get the Red Cross to help us, that's another issue. But we have to keep our windows completely shut in light of the fact that the debris is right outside of our complex.

. . .

We're having a big problem with children who seem to have some kind of asthmatic response to what's going on .. We already had six people move from our complex that we know about.

. . .

Actually we had some problems, too, because our management company said that according to EPA it was very safe and so they never cleaned our terraces or you know, we've asked them to wet down the common areas, but they really have not done it . . . They say that we are actually responsible for cleaning our individual apartments, that the law says they are not responsible. As far as the outside, they said that the EPA said our environment is safe, so they're not required to clean.

. . .

[Transcript of the minutes of the Committee on Environmental Protection, City Council, City of New York, 11/8/01, Testimony of Diane Lapson, representing Independence Plaza North, pp. 63- 77]

Excerpts from NYC DOH cleanup guidelines and press releases

NYC DOH do-it-yourself cleanup guidelines

The NYC DOH cleanup guidelines, below, do not even recommend dust masks, much less HEPA respirators indoors, even in the most contaminated spaces. The guidelines do not say anything about the building first being "cleared" prior to coming in to use these guidelines. The guidelines begin with the following paragraph, and get successively worse as they proceed. They do not say that the building needs to be cleared first by the landlord, nor do they say that if the dust more than some undefined "minimal," a professional contractor should be used.

These unsafe inadequate guidelines need to be contrasted with the much more rigorous, whole-building cleanup that EPA performed on one building at 110 Liberty St. in lower Manhattan. Even EPA's stringent cleaning measures were not able to lower asbestos and lead concentrations to EPA's benchmarks with just one cleaning, even for the apartment with what EPA called "minimal" WTC dust (no visible dust, except under baseboard heaters). See Section G for a discussion of the 110 Liberty St. study.

> Recommendations for People Re-Occupying Commercial Buildings and Residents Re-Entering Their Homes
>
> What steps should I take upon returning to my workplace or home?
>
> 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. *[emphasis added]*
>
> In a workplace, speak to your supervisor to see if there are special startup and cleaning procedure. In very dusty places, clean-up may be necessary before equipment can be restarted. Follow the cleaning procedures discussed below.
>
> In your home, you should first make sure that conditions are safe. You should enter your home dressed in a long sleeve shirt and pants, and with closed shoes.
> . . .
> Follow the cleaning procedures discussed below.
>
> I have heard that asbestos was released from the collapse of the World Trade Center. What are the health effects of asbestos?
>
> Because some asbestos was used in the building of the World Trade Center, City, State, and Federal agencies have been collecting dust, debris, and air samples since the World Trade Center collapse. As expected, some asbestos was found in a few of the dust and

debris samples taken from the blast site and individuals working in this area have been advised to take precautions. However, most of the air samples taken have been below levels of concern. Based on the asbestos test results received thus far, there are no significant health risks to occupants in the affected area or to the general public.

In general, asbestos-related lung disease results only from intense asbestos exposure experienced over a period of many years, primarily as a consequence of occupational exposures. The risk of developing an asbestos-related illness following an exposure of short duration, even to high levels, is extremely low.

. . .

How should I clean the dust in my apartment when I move back in?

The best way to remove dust is to use a wet rag or wet mop. Sweeping with a dry broom is not recommended because it can make dust airborne again. Where dust is thick, you can directly wet the dust with water, and remove it with wet rags and mops. Dirty rags can be rinsed under running water, being careful to not leave dust in the sink to dry. When done, used rags and mops should be put in plastic bags while they are still wet and bags should be sealed and discarded. Cloth rags should be washed separately from other laundry. Wash heavily soiled or dusty clothing or linens twice. Remove lint from washing machines and filters in the dryers with each laundry load. Rags should not be allowed to dry out before bagging and disposal or washing.

To reduce dust recirculation, the Health Department recommends using HEPA (high efficiency particulate air) filtration vacuums when cleaning up apartments, if possible. If a HEPA vacuum is not available, it is recommended that either HEPA bags or dust allergen bags be used with your regular vacuum. If these options are not available, wetting down the dust and removing it as described above is recommended.

Carpets and upholstery can be shampooed and then vacuumed.

If your apartment is very dusty, you should wash or HEPA vacuum your curtains. If curtains need to be taken down, take them down slowly to keep dust from circulating in the air.

To clean plants, rinse leaves with water. Pets can be washed with running water from a hose or faucet; their paws should be wiped to avoid tracking dust inside the home.

How can I remove dust from the air?

Air purifiers may help reduce indoor dust levels. HEPA air purifiers are superior to other models in filtering the smallest particles. Air purifiers are only useful for removing dust from the air. They will not remove dust already deposited on floors, shelves, upholstery or rugs. Keep windows closed when using an air purifier.

. . .

[NYC DOH, 9/17/01, http://www.ci.nyc.ny.us/html/doh/html/alerts/wtc3.html]

NYC DOH press releases concerning do-it-yourself cleanup guidelines

9/17/01

HEALTH DEPARTMENT OFFERS RECOMMENDATIONS FOR INDIVIDUALS REOCCUPYING COMMERCIAL BUILDINGS AND RESIDENTS RE-ENTERING THEIR HOMES

. . .
New York City Health Commissioner Neal L. Cohen, M.D., said "As some buildings near the World Trade Center may have sustained structural damage, experienced power loss, and/or been subject to migrating dust and debris from the blast, the Health Department working with numerous agencies have been actively monitoring the condition of buildings in and around the blast area to determine when occupants may safely resume tenancy. Property owners and managers are being instructed to assess the stability and safety of their buildings. This includes checking and, if necessary, restoring utility services."
. . .
Recommendations for Cleaning Homes and Office Space

The best way to remove dust is to use a wet rag or wet mop. Sweeping with a dry broom is not recommended because it can make dust airborne again. Where dust is thick, directly wet the dust with water, and remove it in layers with wet rags and mops. Dirty rags can be rinsed under running water, (try not leave dust in the sink to dry). Used rags and mops should be put in plastic bags while they are still wet and bags should be sealed and discarded. Cloth rags should be washed separately from other laundry. Wash heavily-soiled or dusty clothing or linens twice. Remove lint from washing machines and filters in the dryers with each laundry load. Rags should not be allowed to dry out before bagging and disposal or washing.

Because the dust particles are so small, standard vacuuming is not an efficient way to remove the dust and may put dust back into the air where it can be inhaled. HEPA (high efficiency particulate) efficiency filtration vacuums capable of trapping very fine particles can be used. If a HEPA vacuum is not available, either HEPA bags or dust allergen bags should be used with your regular vacuum. Carpets and upholstery can be shampooed and then vacuumed.

If your apartment is very dusty, you should wash or HEPA vacuum your curtains. *[emphasis added]* If curtains need to be taken down, take them down slowly to prevent making dust in the air. To clean plants, rinse leaves with water. Pets may be washed with running water from a hose or faucet; their paws should be wiped to avoid tracking dust inside the home.
. . .
Additional recommendations include:
--Avoid sweeping or other outdoor maintenance;
--Keep outdoor dust from entering the home;
--Keep windows closed;
--Set the air conditioner to re-circulate air (closed vents), and clean or change the filter frequently;
--Remove shoes before entering the home for several days (once you first make sure there is no broken glass).
--Air purifiers may help reduce indoor dust levels. Air purifiers are only useful for removing dust from the air. They will not remove dust already deposited on floors, shelves, upholstery or rugs.
Keep windows closed when using an air purifier.
. . .
[Press Release, New York City Department of Health Office of Public Affairs, 9/17/01, http://www.nyc.gov/html/doh/html/public/press01/pr80-917.html]

9/22/01

NYC HEALTH DEPARTMENT DISTRIBUTES HEALTH RECOMMENDATIONS FOR RESIDENTIAL AND COMMERCIAL REOCCUPATION

. . .

New York City Health Commissioner Neal L. Cohen, M.D., said "The Health Department is continuing to work with federal, state, and local agencies to assess the safety of neighborhoods affected by the collapse of the World Trade Center buildings. While there are no significant adverse health risks to the general public, residents and business owners who are allowed to return to their buildings should follow Health Department recommendations to minimize exposure to dust and other particulate matter that may cause throat and eye irritation.

. . .

To decrease the possibility of dust inhalation, persons who live or work within the general vicinity of the blast zone - south of Warren Street, west of Broadway, and north of Exchange Street - and who have been approved to resume tenancy, are advised to wear a dust mask while outside. Dust masks are not necessary for residents in other areas. It is unnecessary to wear a mask while inside buildings as long as cleaning procedures outlined below are followed. *[emphasis added]*

. . .

Residents should check with building managers and/or owners to make sure that their buildings have been assessed and certified safe by the City of New York. This includes structural stability; and the safe operation of gas, electrical, water, steam service, heating, ventilation, and air conditioning systems. *[emphasis added, note no mention of cleaning]*

. . .

Tenants are advised to use a wet rag or a mop to remove any dust. Sweeping with a dry broom is not recommended because it may make dust airborne again.

Where dust is particularly thick tenants are advised to directly wet the dust with water, and remove it in layers with wet rags and mops.

When done used rags should be put in plastic bags while they are still wet, and bags should be sealed and discarded.

To reduce dust re-circulation, the Health Department recommends using HEPA (high efficiency particulate air) filtration vacuums when cleaning up apartments, if possible. As an alternative, wetting the dust down with water and removing it with rags and mops is recommended.

Once situated, residents are advised to avoid sweeping or other outdoor maintenance, keep windows closed, set the air conditioner to re-circulate air (closed vents), and change or clean the filter frequently.

Run hot and cold water from each of the taps for at least two minutes, or until water runs completely clean.

. . .

[At no place in this "fact sheet" is the word asbestos ever used.]

[NYC DOH, 9/22/01, press release, http://www.ci.nyc.ny.us/html/doh/html/public/press01/pr84-922.html]

12/14/01

The collapse of the World Trade Center (WTC) caused a large amount of dust, soot, ash, and other building materials to enter into some homes in the surrounding area. Because work continues at the site, dust can still be a concern for some residents. Dust can irritate your eyes, nose and throat, and make it hard to breathe. Small amounts of asbestos may also be present in some of the dust in the downtown area. If you are cleaning up dusty areas, you can take steps to protect yourself and keep the dust from getting in the air. If the dust is beyond a minimal amount or beyond what you feel comfortable cleaning up on your own, seek professional cleaning companies to help.
. . .
[At no place in this "fact sheet" is the word asbestos ever used.]

[New York City Department of Health Responds to the World Trade Center Disaster FACT SHEET FOR CLEANING HOMES NEAR THE WORLD TRADE CENTER, 12/14/01, http://www.nyc.gov/html/doh/html/alerts/wtc11.html]

Criticisms of NYC DOH do-it-yourself cleanup guidelines

The unsafe ineffective do-it-yourself cleaning methods in the NYC DOH guidelines was widely criticized by health professionals and in the press. This is why EPA made all the false claims that it had actually recommended professional certified asbestos abatement, that citizens should assume that the dust contained asbestos, and that NYC was supposed to insure that landlords had both cleaned up individual apartments and offices before allowing anybody back.

On 9/22/01, Monona Rossol, industrial hygienist with Arts, Crafts, and Theater Safety[14] wrote a press release critical of the NYC DOH cleanup guidelines. This press release was co-signed by the New York Environmental Law and Justice Project.

9/22/01

Summary. Health officials may think they are doing people a favor by withholding information, but there is no reason to assume that New Yorkers will not be just as courageous in dealing with air quality issues as they have been in dealing with the disaster. Failing to provide this information can cause people to take needless risks. For example, we see footage and have witnessed workers toiling in a haze of dust without respiratory protection or protective clothing.

And the New York Times on September 20, 2001 suggests that residents can clean up their apartments with a $3 mask and a broom. Taking actions like these can damage health and may even shorten lives in the future. Instead, methods chosen to clean homes and offices must depend on analysis of the dust and the amounts present.
. . .
[Downwind from Disaster, NYELJP and ACTS, 9/22/01]

10/01

DUST HAZARDS. ACTS and the New York Environmental Law & Justice Project . . . became concerned about the health of the rescue and security workers and the people who live and work in lower Manhattan. We conducted dust sampling in and around the World Trade Center . . . Analysis of our samples and reports from EPA and other independent groups indicate that some dust samples contain up to 5% asbestos and others up to 80% fiberglass. Silica, dioxins and PCBs also may be present . . .

ACTS and the NYELJP believe that roper advice about cleaning up homes and businesses can only be provided when the composition of the dust in that particular location is known. We are providing referrals to laboratories

. . .

[ACTS Facts, monthly newsletter, Arts, Crafts and Theater Safety, 181 Thompson St., #23, NYC 212/777-0062, ACTSNYC@CS.COM, www.cseweb.com/ACTS]

11/01

LAWS BROKEN . . . These regulations require [respirators, fit testing, respirator training, other protective equipment, HEPA vacuums, sealing of wastes, analysis of samples to ensure proper cleaning] . . . Apparently, the NYC DOH and the NYS DOH have decided to waive these regulations in their guidance for the cleanup of dusts. . . . EPA even refers people at its web site to the less stringent NYC DOH guidance.

. . .

[ACTS Facts, monthly newsletter, Arts, Crafts and Theater Safety, 181 Thompson St., #23, NYC 212/777-0062, ACTSNYC@CS.COM, www.cseweb.com/ACTS]

11/15/01

The mechanism EPA used to waive its own asbestos regulations was to refer parties to the extremely lenient (and arguably illegal) asbestos guidelines of the New York City Department of Health (NYC DOH).

. . .

As stated earlier, the New York City Department of Health (NYC DOH) issued special guidelines directed at "people re-occupying commercial buildings and residents re-entering their homes" after the Trade Center disaster. These may be found at the following web site:

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

The NYC DOH first claims that there is no health risk, stating:

"Based on the asbestos test results received thus far, there are no significant health risks to occupants in the affected area or to the general public."

The guidelines advise wearing a dust mask, but do not specify what type of mask. The guidelines then claim "it should not be necessary to wear this mask if you follow the cleaning procedures detailed below."

The NYC DOH then recommends the following cleanup procedures. They recommend that it is only "best," not required, to use a wet rag or wet mop, or if the apartment is very

dusty, a person should wash or use a HEPA (high efficiency particulate air filter) vacuum, and to take curtains down "slowly" to keep dust from circulating in the air. Air purifiers are recommended, but no specifications are given as to the volume of air that the purifier can process. HEPA air purifiers are also recommended, again with no guidelines as to the volume of air that can be processed by the HEPA air purifier.

The NYC DOH then recommends keeping outdoor dust from entering the home by keeping windows closed, and setting the air conditioner to re-circulate air and cleaning the air conditioner filter frequently. Removing shoes before entering the home for several days and avoiding sweeping or other outdoor maintenance.

In contrast, the EPA national regulations for asbestos cleanup and removal under 40 CFR Parts 61.145 and 61.150 are extensive. They do not even allow individual residents of apartments, coops, or condominiums, or renters of commercial spaces to perform their own cleanups, potentially exposing themselves or others to hazardous exposures. See earlier discussions of the EPA regulations.

The EPA national regulations do not allow optional respiratory protection, such as the NYC DOH suggestion of wearing unspecified types of "dust masks," where the mask does not meet OSHA requirements. The suggestion of using an air conditioner to recirculate air would not be allowed because an air conditioner filter would not trap the small, harmful asbestos particles. Taking dusty curtains "down slowly" would not be sufficient under the national regulations to obviate the need for respiratory protection, which was claimed by the NYC DOH. There are too many other deficiencies of the NYC DOH guidelines to discuss here.

And, as discussed earlier, the EPA national regulations do not allow individual residents or even building owners to plan or oversee their own asbestos cleanup a trained certified professional with qualifications specified in the national regulations themselves must be responsible.

The NYC DOH guidelines are contained on only two pages with fairly large typeface. The combined EPA and OSHA regulations, recommended practices, and supporting technical documents for asbestos control and removal are contained in hundreds of pages.
. . . *[Jenkins' 11/15/01 memo]*

11/20/02

Some of the advice the Health Department has posted for people on how to remove dust in their apartments, Jenkins said, is "ludicrous." One example, from the department's Web site: "If curtains need to be taken down, take them down slowly to keep dust from circulating." "EPA regulations do not allow anyone to oversee and perform ... asbestos removal, such as a resident in an apartment building or a building owner," Jenkins said.
. . .
[Feds, City Ignore Asbestos Cleanup Rules, Says EPA Vet, By Juan Gonzales, NY Daily News, 11/20/01]

1/13/02

But many of the 340,000 or so people who live in the lower part of that island feel they were abandoned and, at the least, fed conflicting information by federal, state and city officials on how to avoid asbestos exposure.

. . .

EPA and the state and city told residents who knew they had asbestos to "mop it up, wash it down and throw it away" and "avoid inhaling dust while doing so."

But throughout the nation, asbestos removal is intensely regulated by state and federal law. The laws, which carry steep penalties, demand that the cleanup be done by personnel wearing special respirators, full head-to-toe protective suits and gloves, and the waste disposed of only at authorized sites.

EPA and New York health departments point fingers at each other as the source of the misleading information. Bellow admits that EPA's Web site linked to incorrect guidance for office and apartment landlords and renters.

"It wasn't our information. It was from the (New York) state or city health department, and we removed it from our Web last month," the spokeswoman said. "Obviously, our asbestos program was overwhelmed by a catastrophe of this magnitude. We are usually only concerned with asbestos from renovations and building demolition."

. . .

[NY officials underestimate danger, Reporter Andrew Schneider: Published in the A-section of the St. Louis Post-Dispatch on Sunday, January 13, 2002. Updated by the St. Louis Dispatch on its anniversary date, 1/13/03, under a new title, "World trade center attack asbestos health threat" and can be found at www.stltoday.com]

FEMA accepts EPA's after-the-fact claim it recommended professional abatement

A draft report by the Federal Emergency Management Administration (FEMA) Office of the Inspector General had been critical of EPA. It said that for 8 months, EPA said there were no hazards and thus no professional abatement or special cleaning was necessary:

For eight months, EPA took the position that no environmental cleaning was necessary.

. . .

[emphasis added] [draft report as reiterated in EPA's comments on FEMA IG draft. EPA's comments were attached as Appendix H to the FEMA IG final report: FEMA's Delivery of Individual Assistance Programs: New York - September 11, 2001, dated: December, 2002, p. 65, http://www.fema.gov/ig/iaprograms.shtm]

EPA was allowed to review a draft of the FEMA IG report, and made the following comment:

This statement is inaccurate. EPA in many public statements, beginning in September 2001, and documents indicated that residents of lower Manhattan affected by dust/debris from the World Trade Center attack should cleanup using techniques that would be effective with asbestos containing material. EPA did this because under its FEMA mission assignment to assist in assessing and cleaning lower Manhattan exterior and

> ambient environs, many samples were taken of bulk dust material (approximately 135) that was in the streets of lower Manhattan. Approximately 35% of these samples showed greater than 1% of the material was asbestos. Given these results EPA recommended that, if residents had any significant levels of dust/debris in their dwellings, they should use professional asbestos abatement cleaners and presume the material was asbestos containing.
> . . .
> *[EPA's comments, Appendix H to the FEMA IG final report, FEMA's Delivery of Individual Assistance Programs: New York - September 11, 2001, dated: December, 2002, p. 65, http://www.fema.gov/ig/iaprograms.shtm]*

Without asking for any documentation from EPA, the FEMA IG made the changes requested by EPA, and throughout its final report now claimed that EPA had advised citizens to get professional abatement.

The proof that EPA did not recommend professional cleaning for asbestos or other hazard abatement, or that EPA did not say to assume that WTC fallout contained asbestos, was given earlier in this section.

Motivation for FEMA accepting unsubstantiated EPA claims

Why did FEMA make the change EPA wanted, without requesting any documentation from EPA? The reason that the FEMA IG report adopted EPA's claims could be this: FEMA itself had almost the identical, unsafe do-it-yourself guidelines for citizens to clean apartments and offices of even the heaviest layers of WTC dust. These FEMA guidelines are still posted on the FEMA website today.

Thus, FEMA is as liable as EPA and the NYC DOH for needlessly exposing citizens to extremely high levels of toxic materials, unprotected, in those first critical months after the disaster when people were returning home.

Excerpts from FEMA do-it-yourself cleanup guidelines

The following are excerpts from the FEMA do-it-yourself cleanup guidelines. They are almost identical to the NYC DOH guidelines, which were quoted earlier in this section.

> Disaster Officials Offer Cleanup Tips For Affected WTC Victims
> . . .
> How should I clean the dust in my apartment when I move back in?
>
> The best way to remove dust is to use a wet rag or wet mop. Sweeping with a dry broom is not recommended because it can make dust airborne again. When dust is thick, you can directly wet the dust with water, and remove it in layers with wet rags and mops.

Dirty rags can be rinsed under running water, being careful to not leave dust in the sink to dry. When done, used rags and mops should be put in plastic bags while they are still wet and bags should be sealed and discarded. Cloth rags should be washed separately from other laundry. Wash heavily soiled or dusty clothing or linens twice. Remove lint from washing machines and filters in the dryers with each laundry load. Rags should not be allowed to dry out before bagging and disposal or washing.

To reduce dust recirculation, use a HEPA (high efficiency particulate air) filtration vacuum when cleaning up apartments, if possible. If a HEPA vacuum is not available, it is recommended that either HEPA bags or dust allergen bags be used with your regular vacuum. If these options are not available, wetting down the dust and removing it as described above is recommended.

Carpets and upholstery can be shampooed and then vacuumed.

If your apartment is very dusty, you should wash or HEPA vacuum your curtains. If curtains need to be taken down, take them down slowly to keep dust from circulating in the air. To clean plants, rinse leaves with water. Pets can be washed with running water from a hose or faucet; their paws should be wiped to avoid tracking dust inside the home.
How can I remove dust from the air?

Air purifiers may help reduce indoor dust levels. HEPA air purifiers are superior to other models in filtering the smallest particles. Air purifiers are only useful for removing dust from the air. They will not remove dust already deposited on floors, shelves, upholstery or rugs. Keep windows closed when using an air purifier. Additional recommendations include:

Keep outdoor dust from entering the home;
Keep windows closed;
Set the air conditioner to recirculate air (closed vents), and clean or change the filter frequently;
Remove shoes before entering the home for several days (once you first make sure there is no broken glass);
Avoid sweeping or other outdoor maintenance.
. . .
The Red Cross is providing cleaning supplies to the affected areas to assist residents as they attempt to clean their homes and return to a daily routine. In addition to distributing traditional clean-up kits, which consists of a mop, broom, bucket, rubber gloves and bleach/disinfectant, additional cleaning supplies will be available for use by the residents. They include dust caps (surgical type), dust masks, shoe and boot covers, lip moisturizer, large trash bags and liquid instant hand sanitizer.
. . .
[10/9/01, http://www.fema.gov/diz01/d1391n24.shtm]

Use of NESHAP cleanup methods, even if regulations not legally binding

The National Emission Standards for Hazardous Air Pollutants (NESHAP's) for asbestos under the Clean Air Act are regulations that require certain work practices, testing, and permits for cleaning up asbestos.[15] They only apply legally to the intentional demolition and renovation of commercial buildings, or apartments with 10 or more units. States and cities may have additional regulations, however, that could address additional situations.

The EPA IG report of 1/27/03 stated the following, faulting the government for not obtaining formal waivers under the NESHAP:

> Were asbestos demolition and renovation work practice standards followed during WTC clean up and recovery operations, and if not, why not?
> . . .
> [I]ndications are that NYC/DDC did not obtain a NESHAP waiver before demolition, and it appears no adsorbent agents were added to water sprayed on buildings; (adsorbents make water stickier), further ensuring asbestos particles do not become airborne. Also, there was a problem, particularly in the early weeks of the response, in getting trucks to stop and be wetted down before they transported asbestos-containing debris from the site. . . . *[1/27/03 EPA IG report]*

It is debatable whether the NESHAP regulations apply to anyone other than the owners of the property. The only person we know of responsible for the intentional demolition of the World Trade Towers is Osama bin Laden, but he didn't own them. The US government, in cleaning up the debris, was not involved in a demolition, but perhaps could be argued to be doing renovation work by removing the debris..

The NESHAP is not a funded regulation like CERCLA (which includes the NCP). The owner of a building is expected to pay all associated costs and obtain all necessary permits. If the government comes in to remove debris from Ground Zero, or a tenant wants asbestos removed from their own apartment, they would not be required to get a NESHAP permit or a NESHAP waiver. Local ordinances may require asbestos abatement contractors themselves to get permits, but not the renter.

EPA has issued guidance on how to manage asbestos releases in catastrophic situations.[16] The situations given as examples in this guidance included a Con Edison asbestos-lined steam pipe explosion in Gramercy Park, NYC, where residents were forcibly evacuated from apartments for a government coordinated cleanup, where whole apartment buildings were wrapped in Tyvek® sheeting and cleaned at one time. See the extensive endnote in this report which describes this incident. Other situations included Hurricane Hugo and the San Francisco earthquake. A range of statutory authorities is discussed, including but not limited to the CAA NESHAP for asbestos. The use of CERCLA (which includes the NCP) when a federal response is required in a disaster is discussed. Any federal response would not be under the NESHAP, but instead under the NCP.

Applicability of NESHAP work practices, if not regulations

It is generally recognized that the work practices specified under the NESHAP should at a minimum be used in remediating any asbestos release, even if the NESHAP regulations are not legally applicable. Work practices include things like wetting down all friable asbestos contaminated materials before removal or using some equally protective technique, air testing, use of proper protective equipment like HEPA respirators, etc.

My 11/15/01 memorandum stated that EPA had essentially waived the NESHAP regulations for the WTC disaster. In hindsight, it might have been better to have said that EPA had waived the tested asbestos abatement protocols established through the NESHAP regulatory and guidance system. EPA responded as follows to my memorandum:

> 11/26/01
> I want to briefly address . . . a memo asserting that EPA asbestos regulations apply to the cleaning of apartments and asserted that EPA waived these regulations. EPA strongly disagrees. The Agency did not waive any requirements. The regulations cited apply to facilities being demolished or renovated. These regulations were clearly not intended to address acts of terrorism, nor to cleaning up dust from apartments and offices. In fact, the requirements could not be reasonably applied to such spaces. Under EPA's regulations, materials must be completely soaked. Obviously, soaking carpets, couches, stereo equipment and other belonging would damage them and might make it harder to completely remove the dust.
> . . .
> *[Testimony of Kathleen Callahan, Acting Deputy Regional Administrator U.S. Environmental Protection Agency, Before the New York State Assembly, 11/26/01.* [17]

By this testimony, EPA is falsely claiming that the work practices under the NESHAP would have required wetting down personal belongings. There is a whole system of guidance under the NESHAP which specifies work practices to abate a range of objects, including household furnishings, which do not require wetting them down. Certified asbestos abatement professionals routinely use these techniques and obtain waivers pursuant to NESHAP procedures from any requirements for the baseline wetting down of all surfaces prior to removal and disposal as asbestos containing wastes. The wetting down process only applies to the disposal of wastes under the NESHAP, not to the abatement of objects which will be retained.

A day later, an internal EPA document did admit that the NESHAP regulations did not require soaking all materials with water.[18] The new argument was proffered that it would be impossible for EPA or the NYC DEP to approve the paperwork for the standard waivers for other procedures, like HEPA vacuuming, etc. All these rationales by EPA are a ruse to get around the fact that EPA's recommendations to use the NYC DOH do-it-yourself guidelines are both unsafe and ineffective.

11/27/01

We have been asked to respond to questions that have been raised about whether certain federal Clean Air Act regulations are applicable to the cleaning of apartments and office spaces that have dust from the World Trade Center collapse.

Some of these questions have been raised in a memorandum written by a Dr. Cate Jenkins, an environmental scientist employed in the Office of Solid Waste in EPA's Washington Headquarters. Dr. Jenkins makes two major assertions: (1) that these regulations apply to the cleaning of apartments and offices, and that EPA has waived these regulations . . .

. . .

- The regulations in question were not intended to address acts of terrorism, nor any broad-scale contamination that may ensue from such acts. The regulations she cites apply to owners and operators of a facility carrying out a "demolition" or a "renovation" where those activities will cause the disturbance or removal or more than a specified amount of asbestos-containing material. Whether or not the cleaning of apartments and offices could be interpreted to constitute "renovation" as that term is defined in the regulations can be debated. What is clear, however, is that the instructions in those regulations for how to remove and handle asbestos-containing materials during a "renovation" are generally not practical for or germane to the task of cleaning residential and office space of WTC dust that may contain relatively small amounts of asbestos.

  . . .

- By contrast, the instructions in the EPA demolition/renovation regulations would *not* be either helpful or germane to the problems faced by residents and workers in downtown Manhattan. These regulations require that when ACM is to be disturbed during a demolition or renovation activity, it must first be thoroughly wetted down before removal. This would be completely impractical in homes and offices, where dust has covered papers, files, clothing, bedding, carpeting, upholstery, and so on. Soaking all such items with water would destroy the very items that people are trying to clean and protect. And it would make it much harder perhaps even impossible to then remove the soaked dust from those items; the items themselves would probably have to be discarded. Imagine what would happen if you had dust on your carpet, or on hour sofa, and then soaked it with water before trying to scrape up the dust; it wouldn't work. Moreover, much of the dust was actually pulverized concrete, which might pose even larger problems if it were soaked with water. In short, advising people to follow the instructions in the NESHAPs demolition/renovation regulations would be unhelpful even absurd and we can be sure s uch advice would not be followed.

- Under the NESHAPs regulations, a person carrying out a demolition or renovation may, with EPA's prior approval, remove ACM without first wetting it, if the person can demonstrate that wetting the ACM would "unavoidably damage equipment .... " But even if EPA grants such approval, there are alternate requirements in the regulations that are impractical for an apartment or office space (*e.g.*, specially designed ventilation and particulate collection systems). Moreover, it is unrealistic to think that each resident, building or office manager in downtown Manhattan could have made a written request for such approval from EPA, with full supporting documentation; or that EPA could meaningfully evaluate such requests.

. . .

- Note: There are some situations in which the demolition/renovation regulations *would* apply to buildings affected by the WTC disaster. For example, if a building was damaged in the disaster, and will be renovated before being re-inhabited, the rules would apply if there is asbestos in the building, in quantities exceeding the regulatory threshold, in the area(s) to be renovated.

. . .

In summary, EPA has given consistent, practical and protective advice to residents and workers in downtown Manhattan with respect to cleaning their spaces. The federal demolition/renovation regulations were designed for completely different circumstances, and indeed have only limited value as guidance in this unprecedented situation. EPA has certainly not "waived" these regulations; but EPA has properly looked beyond the regulations in providing good advice.

. . .

[DRAFT: November 27, 2001, ATTORNEY WORK PRODUCT, ATTORNEY-CLIENT COMMUNICATION, signed by Walter Mugdan, EPA Region 2 Counsel]

F: STORIES OF CITIZENS

The following are excerpts of news reports of citizens attempting to clean up WTC dust themselves, problems citizens have with breaking leases when they try to move away from the pollution, and health problems.

The problem with not being able to break leases and move away from the contaminated zone is an important issue. Since 9/11/01, I have heard many other stories like this first hand, because citizens would try to get me to testify on their behalf, which I could not as a government employee.

9/12/01

"Mountains of soot tore through the city's narrow downtown streets like giant tornadoes, blanketing everything in an inch or more of dust as office workers tried desperately to race ahead of the wave. Day turned into night -- and then into hell -- as the wave enveloped thousands of people. An unknown number may have suffocated. 'A lot of the vehicles are running over bodies because they are all over the place,' said Emergency Medical Service worker Louis Garcia after reports indicated that bodies were buried beneath 2 feet of soot on streets around the Trade Center. Thousands of other New Yorkers, many covered in the heavy ash that rained from the top floors of the 1,250-foot towers, stood staring in disbelief as the buildings thundered to the street. In their place rose two plumes of thick gray smoke that were visible for miles, an eerie reminder that hung in the air for hours. Firefighter's Fright Firefighter Tom Boccarossa, 43, from Engine 205, was standing right outside the building when the first tower collapsed. 'I got tossed and buried,' he said . . . 'I crawled under a car. I couldn't see. It was totally black. I thought my life was over.' . . . Joel Graber had narrowly escaped the first collapse -- 'It was a black tidal wave of soot that roared down Cedar St.' – when the second one hit . . . 'I saw people falling down, having seizures, exploding in tears.' Carol King, who works for the city's corporation counsel at 100 Church St., had just come out of the subway when she saw a wall of soot coming toward her. 'I was blinded,' said King, who lives in Queens."

. . .

[Debris & Death Drape Downtown, 9/12/01, NY Daily News]

9/23/01

Worried about potential environmental hazards, lack of services and the possibility of more attacks, hundreds of Battery Park City residents are desperate to break their leases and move far away from the remains of the World Trade Center. Some buildings are trying to accommodate their wishes. Others are not, or are unsure what to do...Cheryl Graham, 28, who is eight months pregnant with her first child, wants to avoid courtrooms even though her landlord at 400 Chambers St. is taking a hard line. She said if she and her husband break their lease, they will forfeit their security deposit and be liable for the rent until their $4,300-a-month, two-bedroom apartment is rented again. But she doesn't want to give birth while living near Ground Zero, either. 'When you bring a baby into the world, it's not the safest, happiest area,' she said. 'For the next six months, they'll be picking up debris. I'm really concerned about air quality.'...Those issues have led to the organization of the Battery Park City Residents Association, which is trying to negotiate lease cancellations and rent reductions. They may also hire experts to study air quality

and landfill stability, according to founder Donald Scherer.

. . .

[Fearful Tenants Fight to Break Leases: They want out of Battery Park, 9/23/01, NY Daily News]

9/26/01

Two weeks after the catastrophic attack on the World Trade Center towers, thousands of evacuated New Yorkers are returning to nearby homes and offices, counting their blessings that they escaped the disaster. But fires still smolder downtown and crews continue to sift through the rubble and carry away debris laden with asbestos and other potential health dangers. As the dust clears, too, some residents wonder what else might be in the plume of ash and smoke that exploded over their city.

A BLANKET of gray soot an eighth-of-an-inch deep has settled on everything in their apartment, from the oversized couch decorated with pillows, to the magazine-lined coffee table and sheet music-covered piano. Dusty? "Pompeii-esque is more like it," says Diane Miller, a New Yorker who recently returned to her co-op apartment two blocks from the scene of the devastation. She rejoices that her family escaped the terrible attack and that their building still stands. "I don't want to sound ungrateful," she says. "We're alive that's what's important."

Still, like others who returned to downtown, she's concerned about what is in the dust and ash, and has decided to hire professionals to do the cleanup. With an infant, and being herself asthmatic, the family decided to even delay moving back in, despite public assurances of safety.

"Moving back into our building as fires still smolder, and as clouds of dust, several stories high, rise up when debris is lifted by heavy equipment to be removed, does, in my book, constitute a health hazard, especially for a 1-year-old baby," she says.

Miller and her husband are now researching the possibility of moving everything out, having it cleaned item by item and stored until the apartment can itself be cleaned, including the ducts.

Most New Yorkers are still in a state of shock from the terror attacks, says another resident of the financial district, Marcy Gordon, and few thought much about the air they were breathing, at least initially, she says. Now people are concerned. "For the first few days, it felt like we were breathing glass. I'd like to know what it was," she says.

. . .

[Uneasy breathing, As the dust settles in New York, concerns linger about health risks in the air, 9/26/01, By Francesca Lyman, MSNBC, www.msnbc.com]

10/19/01

No more than a few hours after the World Trade Center fell, the media were reporting that the north tower had contained 40 floors of asbestos, all of which was now swirling around downtown Manhattan. City health officials, the Occupational Safety and Health Administration and, most importantly, the Environmental Protection Agency, landed on the scene to conduct air-quality tests. What they did next was nothing less than astonishing: They said it was safe to be downtown.

For anyone who knows the history of these agencies, such proclamations are akin to heresy. For decades, the EPA has taken the lead in zero-tolerance policies toward any "carcinogenic" substance unlucky enough to have caught its eye--whether it be pesticides, Hudson River PCBs or asbestos. This draconian approach has served to encourage unfounded health scares, and created an environment in which people no longer make rational decisions about health risks. It has also led to the nightmare of trial lawyers, lawsuits and corporate bankruptcies.

But on Sept. 11, as with so many things, the EPA's world changed. Faced with a public health scare that could have sent thousands in Manhattan fleeing the city or jamming hospitals, the EPA decided to cough up the truth about asbestos. Its officials bent over backward to get out the message that asbestos was harmful only if breathed at high levels and over sustained periods of time. When reporters pointed out that some of the tests had exceeded the EPA's safety levels, the agency hurried to explain that this was a "stringent standard based on long-term exposure" and repeated that the public was not at any real risk.

. . .

The EPA Comes Clean on Asbestos Federal officials stop chasing a phantom risk. BY KIMBERLEY A. STRASSEL, Wall St. Journal, 10/19/01]

11/8/01

My name is Diane Lapson. I am a Vice President of the Independence Plaza tenant association. . . . Independence Plaza is located on Greenwich Street, about five blocks uptown from Ground Zero. . . . All of the tenants of one of our buildings were evacuated. *[around 6000 tenants in building complex]* Many seniors wound up frightened in shelters

. . .

For the past two months we have spent stressed out days, sleepless nights, because of the steel cement and whatever is attached to them, is carted to the pier alongside our buildings and dropped with the force of the most violent thunder sound you can imagine . . . the use of cheap tarp tears and are discarded and the debris has not been covered. Furthermore, the debris often has been smoking, spreading toxins into our neighborhood over and over again . . . we're having our own problems trying to get the Red Cross to help us, that's another issue. But we have to keep our windows completely shut in light of the fact that the debris is right outside of our complex.

. . .

We're having a big problem with children who seem to have some kind of asthmatic response to what's going on .. We already had six people move from our complex that we know about.

. . .

Actually we had some problems, too, because our management company said that according to EPA it was very safe and so they never cleaned our terraces or you know, we've asked them to wet down the common areas, but they really have not done it . . . They say that we are actually responsible for cleaning our individual apartments, that the law says they are not responsible. As far as the outside, they said that the EPA said our environment is safe, so they're not required to clean.

. . .

[Transcript of the minutes of the Committee on Environmental Protection, City Council, City of New York, 11/8/01, Testimony of Diane Lapson, representing Independence Plaza North, pp. 63- 77]

1/8/02

There was something about the air. For a while after Sept. 11, George Tabb and his wife tried to stick it out in their apartment just north of the World Trade Center, tried to ignore his twice-nightly asthma attacks and her pounding headaches.

EVENTUALLY, THEY moved in with Tabb's stepfather. But Tabb still goes home to pick up his mail, and within20 minutes the metallic taste returns to his mouth, and the wheezing."All of a sudden, boom, I've got a nosebleed, the asthma, a headache," he said. Recently Tabb received evidence that the air in his apartment may be as dangerous as he suspects.

Independent tests results of which are disputed by the ci ty f ound that dust taken from an air vent in his apartment building's hallway contained 555 times the suggested acceptable level for asbestos. Samples from a bathroom vent show dangerous levels of fiberglass. "No one knows what was burning down there" at ground zero, he said. "I am concerned that in five years or 10years, I'm going to be part of a cancer cluster."

. . .

Many of those who live or work downtown report strikingly similar symptoms: nosebleeds, sore throats,bronchial infections and an endless racking cough.

"People's airways are narrowing down," said Dr. Stephen Levin, medical director of the nationally renowned Mount Sinai I.J. Selikoff Center for Occupational and Environmental Medicine. "We have cases of new onsetreactive airway disease for people who were in excellent physical condition prior to September 11th."

About one-fourth of the city's firefighters have complained of severe coughing after working at ground zero, andmore than a thousand have filed notices of claims against the city. Last week four Port Authority police officerswere reassigned from the site after they tested positive for elevated mercury levels in their blood.

Dozens of students at nearby Stuyvesant High School have complained of rashes, nosebleeds, headaches andrespiratory infections. Three teachers have left because of respiratory problems. "I'm really concerned," said Marilena Christadoulou, head of the school's Parents' Association. "It's a concernthat comes from the whole unprecedented and unknown nature of what is down at ground zero."

The EPA, which has conducted thousands of tests of Lower Manhattan's air since Sept. 11, has repeatedlyassured residents that the air is safe to breathe. Doctors note that some symptoms could be caused orenhanced by stress and many will undoubtedly dissipate as the last smoldering fires go out and the airgrows clearer. But Levin and others fear the unpredictable effects of the combination of many dangerous substances released into the downtown air could lead to significant long-term health problems.

"Nobody knows," said Regina Santella, a professor at the Mailman School of Public Health at ColumbiaUniversity and director of the National Institute of Environmental Health Sciences Center. "We know what the monitoring data tells us and we know the symptoms of what people have. It's just hard to reconcile the two pieces of information."

. . .

[*In New York, Taking a Breath of Fear, by Christine Houghney, Washington Post, 1/8/02]*

1/13/02

Those continuing the recovery effort at ground zero have hundreds of environmental and occupational health specialists hovering nearby, trying to keep the workers in the pit safe and diminish future exposure to asbestos and other dangerous material.

But many of the 340,000 or so people who live in the lower part of that island feel they were abandoned and, at the least, fed conflicting information by federal, state and city officials on how to avoid asbestos exposure.

"It's like all of us who live down here really don't matter to anyone in any government. We've pretty much been left to fend for ourselves," said Steve Swaney, who, with his wife, lived in a Battery Park apartment.

The World Trade Center, two blocks away, which once filled his view, has been reduced to a huge hole in the ground. It spews an acrid dusty stench, nothing like the time-honored bouquet of roasting chestnuts which used to permeate lower Manhattan through the fall and winter. The Swaneys' patio doors were open when the buildings collapsed. Their one-bedroom apartment, like many of the 238 others in their 15-story building, was covered in dust. Those with insurance paid as much as $10,000 to have professional asbestos crews clean their apartments, Swaney said. The landlord cleaned the rest. "But there was still dust all over the place, and we couldn't get anyone to tell us how much asbestos was still there," he said. The tenants paid to have the dust analyzed, and the dust contained levels of asbestos above 1 percent, which the EPA considers unsafe.

The landlord sent in another cleaning crew. On the streets nine floors below Swaney's balcony, men in air tanks and moon suits slowly waddle behind and beside huge gushing mobile water tanks and purring SuperVac vacuum trucks. The bizarre ballet was precisely orchestrated to wash out, suck up and capture the most minute pocket of dust from Battery Park's promenade, playgrounds, sidewalks, and even children's sand boxes in the park.

Swaney, a 58-year-old computer consultant, has a sick wife. Her ribs are sore from hours of gagging, coughing and choking from the same dust that EPA crews are so carefully removing on the street out front. He wonders why the crews working on the street are so meticulous, using special micro-filter vacuums, wearing special protective clothing and respirators.

But in his apartment, the three-person pickup band of day laborers the landlord hired used brooms, dustpans, old mops and buckets and everyday vacuum cleaners. "They didn't even have masks," he said. "My wife had to find masks for them." He wondered what government officials knew about the dust that they weren't sharing. "To those of us in the middle of this, it's obvious that there is a conscious effort not to put out the facts," said Swaney, who heads his building's tenant association. "I don't know whether it's the White House, or the governor's mansion or the mayor's office, but someone doesn't want this truth about asbestos getting out.

"They don't want to close down lower Manhattan. We're talking about a lot of money, a lot of jobs. That's OK, but is it safe to live here?" Swaney and his wife moved out of lower Manhattan. "Christie Whitman says it fine to return to our homes," he noted. "She's the EPA boss. Should we not believe her when she says our apartments are safe? But how does she know?" That's a question that many are starting to ask.

. . .
[NY officials underestimate danger, Reporter Andrew Schneider:Published in the A-section of the St. Louis Post-Dispatch on Sunday, January 13, 2002. Updated by the St. Louis Dispatch on its anniversary date, 1/13/03, under a new title, "World trade center attack asbestos health threat" and can be found at www.stltoday.com]

1/14/02

No pregnancy book could have prepared Dinella Ascenso for Sept. 11, or for the ominous cloud of white dust that covered her within moments of the first tower's collapse, as she watched in horror from her apartment four blocks away.

With a wet rag covering her face, Ascenso, nine months pregnant, walked from Fulton St. to her mother's house in Greenwich Village, where she stayed for the next week. On Sept. 25, she gave birth to a healthy 8 pound, 12 ounce boy with brown curly hair. But she is not at peace. "It still worries me because he is so young and I am breast-feeding," said Ascenso, whose apartment still fills with so much fresh dust that she has to wipe down every surface and clean the caked filters in the baby's humidifiers every day.

Now, researchers at Columbia University's School of Public Health and the Mount Sinai School of Medicine want to know whether Ascenso and the unknown number of pregnant women who were near the World Trade Center on Sept. 11 have cause for concern.
. . .
Jill Strickman-Ripps was in her third trimester when the planes hit. "I was a basket case," said Ripps, a casting director who lives in Tribeca with her husband and two young sons 12 blocks from the site. "I was consumed with fears about what we were breathing and what could be the long-term effects, which I don't think anybody knows," she said. "I still sometimes wonder, were we just being stupid for not leaving, for not getting out? "I hope they don't find anything scary," she said, adding that she's interested in signing up for the study. "They don't know a lot about what was in those buildings." Oliver Ripps weighed in at 7 pounds, 14 ounces Dec. 17. "So far he seems fine," his mother said, although she and her husband have suffered from dry throat and other respiratory discomforts.
. . .
[Keeping a Watchful Eye On 9/11 Babies, Docs search for toxic fallout from fires & dust, By HEIDI EVANS, NY Daily News, 1/14/01]

2/7/02

Lower Manhattan's biggest commercial landlord is raking in big profits, even though tenants are vacating its buildings and fleeing downtown in a post-Sept. 11 exodus. Brookfield Properties, owner of One Liberty Plaza and most of the World Financial Center, reported yesterday its profits increased 9.5% from a year ago $54 mi llion, or 30 cents a share, up from $46 million, or 25 cents a share.

They're making these kinds of numbers by holding tenants to leases even if they didn't return to their downtown space after Sept. 11.
. . .
One Liberty Plaza, a 2.2 million-square-foot tower, stands across the street from Ground Zero. Immediately after the attack, some news organizations mistakenly reported it to be collapsing. In the months following its reopening, tenants have been slow to return to

One Liberty.
. . .
Yesterday, Brookfield chief executive Ric Clark said it was just 50% occupied, though fully leased. And all these tenants are still paying rent.
. . .
But Brookfield had protected itself by signing long-term leases with its tenants during the height of the recent real estate boom, analysts said. As a result, tenants are on the hook for years to come, unless they can find firms to sublease the space.
. . .
[Tenants Gone, Rents Remain Lower Manhattan landlord profits from long-term leases, By ERIC HERMAN, 2/7/02, NY Daily News]

2/8/02

Five-year-old Phoebe Kaufman's room was once filled with her artwork. Now all that remains is a single picture of a flower, which hangs by her bed. Her parents threw out everything else because paper is porous and might have absorbed dust from the collapsing World Trade Center towers that blasted into their Lower Manhattan apartment through an open window. No one knows whether Phoebe's artwork had become dangerous, and air tests done in that apartment building, about a block from ground zero, have shown the air to be safe. But decisions still had to be made, so everything absorbent stuff ed animals, mattresses, coats went into the trash.

It's the floor that has the family in a quandary now. The family's insurance company said it would pay to have their old wooden floor refinished, but that idea was shot down by their pediatrician, who said that the trade center dust, perhaps containing asbestos or other hazardous materials, was deep in the floor's cracks and that sanding would throw it back into the air.

Community leaders in Lower Manhattan have estimated that about 75 percent of the roughly 20,000 people who lived within a half mile of the trade center have returned to their homes since the Sept. 11 disaster. And all of them are facing the same series of questions and choices about how to live in this altered place and how to assess the environmental risks that the proximity to a disaster site and cleanup project may entail.

This being New York, the diversity of conclusions is boundless. Some people see downtown as a toxic nightmare, a kind of Manhattan Love Canal that has permanently poisoned the area's buildings and apartments with asbestos or chemicals. Others believe the risks are overblown or nonexistent. But in another way, many residents say, the diversity of views reflects the deeper problem they face: that no answer seems certain, scientifically airtight, or obvious. Because there has been little government testing of apartments for air quality and som e tests conducted months ago have still not been published there is no publi c body of facts, no set of numbers that can bestow a feeling of certainty. Some building owners have had their properties privately tested; others have not. And every test that is done becomes ammunition for one side or another those who see great risk and those who do not. How to clean an apartment or an office that was contaminated, how to know when it is clean enough, whether to pay for expensive tests or filters, whether to worry about how well the neighbors cleaned their apartments and rooftops, are all questions that have for the most part been left to individual tenants, owners and workers.

"People have essentially been left to their own devices," said Representative Jerrold

Nadler, a Democrat from Manhattan who represents downtown, and who believes that what he calls the microclimates of downtown the homes and offi ces, the personal spaces and lives of residents and workers have been mostly neglected in the disaster response.

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Beth Kaltman, 22, a model, cleaned her own apartment using paper towels. So did Dr. Jessica Leighton, an assistant commissioner of risk and environmental communication at the New York City Department of Health. Noreen Hennessy and her husband, Elliot Freeman, who live on Warren Street, a few blocks from the disaster site, hired professional cleaners. In the converted factory building on Broadway where Phoebe Kaufman and her family live, some people ripped up their floors. Some mopped up and vacuumed, and others never came back.

Phoebe's father, Frederick Kaufman, installed filters to cover the air ducts that connect to the rest of the building, working on the theory that dirtier air from other apartments or common areas of the building could infiltrate. He cannot say that this, like throwing away Phoebe's artwork, was a necessary step; he also cannot say, when it comes to the health of his daughter and his son, Julian, 2, that it was not necessary, either.

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[February 8, 2002, With Uncertainty Filling the Air, 9/11 Health Risks Are Debated, By KIRK JOHNSON, 2/8/02, NY Times]

2/15/02

The first "World Trade Center syndrome" trial began this week in a cramped, overheated Manhattan courtroom.The bitter tenant/landlord dispute in civil court, before state Supreme Court Justice Douglas E. Hoffman, pits residents of 31 apartments at 80 John St. against themanagement company, known as WSA Management of Garden City. The residents have withheld their rent since November inan attempt to convince the management firm, led by Fred Oliver, to spend more on cleanup of the trade center dust, replace air conditioners, grant rent rebates and allow them out of their leases.

Early on, Oliver's firm did some cleaning of the building and gave tenants a one-week rebate. But in December, the firm sued the tenants for the back rent, which by this month totaled nearly $500,000. So far, settlement negotiations have been fruitless. "We've experienced health problems, the psychological toll of witnessing the destruction and losing friends, and added financial burdens," said Cynthia Lane, the president of the 80 John Street Tenants Association.

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"The government has taken a hands-off attitude toward the buildings, allowing the owners to set their own testing standards," Lester said. "We're hoping this case will set a precedent for the cleanup."

The trial yesterday resulted in another first: An indoor air quality specialist named Uday Singh became the first person qualified by a judge as an expert in World Trade Center dust contamination. He was testifying on behalf of the tenants. Singh said in court that on Feb. 2, nearly five months after the attacks, he found the telltale black and gray dust in several apartments, in the stairwell and on or near fans, air conditioners and other ventilation areas.

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[Tenants vs. Landlord In WTC Cleanup Case, By Graham Rayman, 2/15/02, Newsday]

2/21/02

New York City is willing to pay people to live downtown. In an effort to help Lower Manhattan to recover from the September 11th terrorist attacks, the city is willing to cut a check to get would-be tenants to move in.

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You've heard of programs that help people get their first homes or move into economically depressed, or blighted neighborhoods. Now, state redevelopment officials will approve a hundreds of million dollars in grants for people who move to Lower Manhattan or commit to staying there for the near future. The program has the potential for luring many residents downtown and keeping many others there.

The money is coming from the agency that oversees rebuilding downtown, the Lower Manhattan Development Corporation. Reportedly, some $200 million dollars will be available for downtown residents, or people who move there and will stay for at least two years.

The grants are available to anyone who lives or moves below Canal Street and are tied to a residents proximity to Ground Zero. The closer they are to the Trade Center site, the more they get. Its available for rent, maintenance or mortgage payments

. . .

In all, this may sound like a good deal, but you have to think about this fact. A lot of people that currently live in Lower Manhattan, are still concerned about environmental issues following the attack on 9/11.

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[WABC New York, Money For Moving To Lower Manhattan? 2/21/02, http://abclocal.go.com/wabc/news/WABC_022102_money.html]

2/24/02

David Newman, an industrial hygienist with the New York Committee for Occupational Safety and Health, a non-profit, union-based health and safety organization in Manhattan

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Newman maintained that widely publicized statements made after Sept. 14 and later by EPA Administrator Christie Todd Whitman downplaying any hazard influenced subsequent government response efforts as well as subsequent behavior by workers, employers, residents and landlords.

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Landlords and employers, relying upon EPA statements, have encouraged or forced workers and tenants to return to or remain in offices and residences which, in many cases, have not been adequately tested for contaminants or appropriately cleaned or abated, Newman added.

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Brickman said that she and her family evacuated after the attacks, but the lung problems from the fires at Ground Zero led her to keep her son in midtown Manhattan. When they returned they tried to get out of their lease but her landlord refused to let them break their lease.

"Basically, we were bombed and we wanted to leave for our safety but our landlord

wouldn't let us out and required us to pay more than $3,000 as a penalty," Brickman said. "We have air ducts from the rooftop air-conditioning system that shower us with dust because the landlord refuses to clean the air conditioning system."

Brickman's building staged a rent strike and as a result she can leave in April and pay half of the lease penalty. She and her husband cleaned dust in common areas in their building with a broom and vacuumed their apartment with a regular vacuum cleaner. Brickman worries that after her family leaves someone moving in will open the ducts for air conditioning and dust will sift in on them because they don't know it's there.

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"It's ironic that the Lower Manhattan Development Corp. is now offering grants of up to $12,000 for those willing to move near Ground Zero when they just ignore the health issue of the dust, Brickman said. "People are crazy to move here and take the money, I'm appalled at how they've handled this and how it all comes down to a money and no humanity."

The Lower Manhattan Development Corp. has approved grants of up to $500 a month or 30 percent of a rent or mortgage payment for tenants who sign a two-year lease.

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[WTC air quality questioned at hearing, 2/24/2002, by Alex Cukan, United Press International, http://www.upi.com/view.cfm?StoryID=24022002-032529-7986r]

5/8/02

The federal Environmental Protection Agency will lead an effort to clean up and test apartments south of Canal Street in Lower Manhattan that were fouled by the dust and ash from the destruction of the World Trade Center, a person who was briefed on the plan said.

The cleanup plan is a sharp reversal in policy by the E.P.A. and the other government agencies that led the environmental response to the disaster. For months, despite criticism from politicians and residents who said that the government was shirking its responsibilities, the agency said indoor spaces were the province of owners and residents, not the government. So most people, if only to get on with their lives, followed that guidance and did the cleanup work themselves or hired others to do so.

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[E.P.A. to Lead Cleanup Effort of Homes Close to Ground Zero By KIRK JOHNSON, 5/8/02, NY Times]

5/9/02

"It has been totally willy-nilly as far as cleanup down there," Cate Jenkins, a veteran environmental chemist at the EPA's Washington headquarters, said in an interview. "A lot of asbestos fell through the cracks."

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But the cleanup guidelines New York issued to building owners and residents were widely criticized as inadequate. The city recommended, for example, wiping down surfaces with a wet rag. But it didn't specify what protective gear should be worn during the cleaning or how to tell if potential hazards had been eliminated.

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But Ms. Jenkins and other critics of her agency's performance have said that one of the EPA's failings was its unwillingness to urge New York to use the most-up-to-date method of asbestos testing -- a method employing electron microscopes that the EPA has used elsewhere. The city instead advised building owners to use only an older technique, in which testers search for contaminants using polarized-light microscopes that work much like ones used in high-school chemistry labs. Electron microscopes, used with computers, can detect asbestos fibers that light scopes don't reveal.

Some residents who have arranged for their own tests using electron scopes have found asbestos missed by light testing. At 150 Franklin St., a seven-story cooperatively owned building several blocks north of the disaster site, residents each vacuumed and wiped down their apartments, following the city's guidelines. They also swept the roof and other common areas.

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Still, electron-scope testing last month found asbestos levels of between 1.2% and 1.8% of sampled material. One sample was taken from a third-floor elevator shaft, near a day-care center. Similar levels were found at two locations on the building's roof. Medical experts say there isn't a "safe" level of the substance, but the federal government requires asbestos removal from work sites if the level exceeds 1%.

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[AFTERMATH OF TERROR, Bureaucratic Buck-Passing Delayed Asbestos Cleanup After 9/11 Attacks, By JIM CARLTON, 5/9/02, THE WALL STREET JOURNAL]

6/18/02

Nine months after the attacks on the World Trade Center forced the staff of The Wall Street Journal to flee its nearby offices, the paper's executives say the former newsroom is ready to reopen. But many of the reporters and editors say they are afraid to go home.

Yesterday, in a last-ditch effort to dissuade the Journal's management, a group of reporters and editors presented the paper's managing editor, Paul E. Steiger, with the results of an employee survey indicating that a large majority of the news department opposed a return to the World Financial Center. Of the 175 reporters and editors responding, 126, or 72 percent, wanted The Journal to find permanent space elsewhere.

The debate over the psychological and health effects of returning to the site of the World Trade Center's collapse has raged for months within The Journal's newsroom.

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The most common anxiety expressed by the staff was the uncertainty over lingering health hazards. "We don't have a clue about what the real health issues are," one respondent wrote, according to a copy of the survey results obtained by The New York Times. "Why is Dow Jones making us guinea pigs?" Seventy-seven percent of those opposed to the move feared health hazards either inside the office or from sites nearby. Another 36 percent cited traumatic memories of the collapse of the World Trade Center.

In interviews yesterday, however, several reporters said some recent reversals in the company's position had undermined its credibility. On May 9, the company notified its employees that the office space met air safety tests and reconstruction was about to begin. Then, on May 21, the company told employees that construction had halted because overlooked pockets of asbestos had turned up inside the building's ducts. Finally, on June 3, Dow Jones once again told its employees that all asbestos was removed and the construction was resuming.

"That shook the confidence of some people around here," said Carlos Tejada, a Journal reporter who is researching and tracking the company's safety efforts on behalf of the staff. He has sent critical assessments of its progress to the staff. The union is also paying to conduct its own tests.

Joe Dizney, The Journal's design director, said: "The big problem is not going to be in the office. The big problem is going to be the surrounding area and there is no way around that." He added, "The prevailing winds, thank God, are from the west to the east, and we are on the water side."

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[Some at Wall St. Journal Fear Return to Manhattan, By DAVID D. KIRKPATRICK, NY Times, 6/18/02]

6/19/02

Located one block north of the World Trade Center, the 1 million square- foot office at 100 Church St. suffered serious damage on Sept. 11. Over 500 windows were blown out, and much of the building was permeated with toxic dust. Its tenants, including the Bank of New York, Merrill Lynch and the City of New York's legal department, were forced to relocate until it was safe to return.

But when was that? According to the owner, Zar Realty Management Corp., the building wasn't ready to be reoccupied until early spring. But Allianz Insurance Co., the property's insurer, believes 100 Church was safe for tenants to return in January. The fight is continuing even though most of the tenants are now back in the building.

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The dispute is one of the many that have erupted among landlords, insurance companies and tenants following Sept. 11 over how much cleanup work is necessary before buildings are habitable.

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So they had to figure out the rules as they did the work, and towards the end of 2001, Zar and Alllianz began to disagree over what those rules were.

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According to the insurance company, Zar's environmental engineer, Ambient Group Inc., conducted air tests in January that failed to disclose the presence of asbestos at unsafe levels. "Thus, as of January 2002, the premises were certified as restored and ready for re-occupancy by Ambient," states a letter sent to the Insurance Department by Albert Bosch, an Allianz assistant vice president.

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But the New York Law Department also hired an environmental engineering firm, TRC, to check on the safety of the building, and TRC came up with different results. TRC analyzed dust samples from the building's mechanical rooms and heating-andventilation system and found that asbestos and lead levels were unsafe. "Based on these results, TRC recommended a recleaning and encapsulation of the return-and-supply ducts and air-handling units in the building, Mr. Stein pointed out in a letter to the Insurance Department.

Then it was Allianz's turn to reinspect. The insurance company hired Lawrence Kornreich, of Enviro-Sciences Inc., to evaluate TRC's tests. Mr. Kornreich reported that TRC's tests "were based upon surface wipes and micro vac sampling tests, which are not the testing methods prescribed" by the city's Department of Environmental Protection, according to Mr. Bosch's letter. In addition, Mr. Kornreich stated that the "aggressive air

samples" tested by Ambient "were sufficient to demonstrate that the premises could be reoccupied," the letter states.

So the battle was down to dueling testing methods. Mr. Stein said it's not clear whether the contamination that TRC found occurred on Sept. 11 or whether those areas were cleaned and then recontaminated during the cleanup process. But once TRC found the dangerous dust, Zar had little choice but to clean it up, and Allianz was responsible for reimbursing the costs, he said. The air-quality tests performed by Ambient in January "were voided by the discovery of areas that were contaminated," he said.

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[Landlord and Insurer Battle over 9/11 Cleanup, 6/19/02, By PETER GRANT, Wall Street Journal, Special to RealEstateJournal.com, http://homes.wsj.com/columnists_com/bricks/20020619-bricks.html]

6/19/02

Ariel Goodman, already afflicted with asthma, has an apartment opposite Ground Zero. She remembers watching as church volunteers cleaned her place last October. "Two hours into the cleanup I got dizzy. I had a real bad asthma attack and was sick for a week," says the 35-year-old financial consultant, who is living elsewhere until she's sure her apartment is safe. In the meantime, she says, "I feel dizzy and nauseous from diesel and bus fumes. They never bothered me before."

Lower Manhattan resident Kathryn Freed, who's been diagnosed with chemical bronchitis, says that today her body is so sensitive she's "better than a smoke detector."

"I immediately react to smoke and any kind of strong smells," says Freed, who, on September 11, was close to finishing a 10-year term as a New York City councilwoman and spent day after day checking on constituents. "My nose, my throat, my lungs burn, I get heartburn, and I feel like I'm breathing dust."

She may be. After leaving Manhattan residents on their own for eight months, the Environmental Protection Agency announced in early May that residents could have their apartments tested and cleaned of dust and debris by calling a special hotline. The unprecedented program came about after the EPA was besieged by residents afraid that their homes were contaminated with asbestos or other life-threatening chemicals in dust that settled after the twin towers went down.

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Before the disaster, Freed says she never had allergies or difficulty breathing. But that suddenly changed. From September 11 until the end of January, she had nosebleeds every other day. Now she uses an inhaler twice in the morning and twice at night.

Physical ailments haven't been the only problems resulting from 9/11. Until very recently, Freed and her neighbors were under constant siege. Their 5,000-unit complex, five blocks north of where the World Trade Center towers stood, is right next to the barge on the Hudson River that hauled away all the WTC debris. Every day, 24 hours a day, diesel trucks dumped massive loads of concrete and steel, throwing up clouds of dust. The debris was then shoveled up by giant cranes and dropped with a thundering crash onto the barge. "Every time you hear it," Freed said while the cleanup was still under way, "it's like the planes hitting again."

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[Health Fallout from Trade Center Attack, 6/19/02, By Laurie Udesky

CONSUMER HEALTH INTERACTIVE,
http://www.ahealthyme.com/topic/wtc?_requestid=52192]

7/23/02

On the morning of Sept. 11, John and Miriam Wardzala had been married less than a year and had already been through some tough times.

John had had two bouts with cancer. Doctors had recently removed a tumor from Miriam's throat, leaving her with a tracheal hole to assist her in breathing. That morning, they were in their tiny 11th-floor studio apartment on John St., a few blocks from the World Trade Center, when they heard the first explosion. John, a technology coordinator for The Wall Street Journal, was late for work, so he didn't pay much attention to the noise.

But as he headed out the door a few minutes later, he bumped into a neighbor who told him there was some kind of accident at the twin towers. John rushed back to his apartment to get Miriam. He grabbed his camera, and the two headed outside, where they joined thousands of bystanders all staring in disbelief at the flames and smoke.

John kept snapping photos until he heard an even louder roar, looked up, and saw the sky falling. They made a mad dash into the subway station at John St. and Broadway, but the tornado of dust followed them inside and covered them with soot. John took off his shirt and wrapped it around this wife's neck to keep the dust out of her tracheal hole.

Once they could see again, they emerged from the station and inched their way up the street. Just as they reached their building, the second tower fell and another dust cloud enveloped them in the lobby. They finally made it back upstairs to their apartment, washed off the dirt, packed duffel bags and left to stay with Miriam's sister uptown.

Asked to break lease. When they were allowed to return a few days later, there was no electricity, dust was everywhere and the acrid smell from the fires at Ground Zero was unbearable. "I couldn't breathe that stuff and my nose started bleeding," John said.

In November, they wrote to the owners of their building, the Kibel Co., explained their health conditions, and asked if they could break their lease.

"I have a trach and must sleep with it unplugged," Miriam wrote. "I must also unplug when food becomes caught in my esophagus during meals. Unplugging now in the apartment at mealtimes and at night with the inescapable foul air has made breathing here sickening."

They were offered a reduction of $100 in their $1,785 monthly rent.

"We're both in our late 30s and were planning on children," John said. "Lower Manhattan was just no place for a pregnant woman."

So they packed their furniture, walked out on their lease and found a place in uptown Manhattan. In December, Miriam became pregnant, and on the Fourth of July she gave birth to premature twin boys, Joseph and John. The twins are still in the intensive care unit of a local hospital.

Just around the time her children were born, Miriam was served with a Civil Court summons by Aubry Bennett Stollow, the lawyer for the Kibel Co.

Their old landlord had sued them for $5,887.30 in back rent. He also wanted an additional $2,500 in legal fees.

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Contacted by this reporter, lawyer Stollow seemed embarrassed by the facts. He said he would talk with the owners immediately and get back to me. He called back within an hour. "This case is going nowhere," Stollow said. The letter the couple sent in November explaining their situation had apparently never "reached the hands of the ultimate powers who make the decisions," Stollow said.

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[Out of the dust, a happy ending, 7/23/02, by Juan Gonzales, NY Daily News]

9/6/02

When the World Trade Center exploded in a cloud of dust and fire last year, LaVerna Bradley, 71, watched in horror from her apartment on Madison Street, just ten blocks away. . . . A cloud of thick, gray dust blew through their open windows before Arthur was able to close them. . . . A fine powder quickly coated everything in their home, including the kitchen counter, the velvet sofa, and the bed the couple had bought when they got married in 1984. "It was like being in England during the blitz," says LaVerna. "Everything was confused."

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Residents who remained in lower Manhattan also resumed life without masks, choosing to believe the government's assurances. The EPA says it has no regulations or standards regarding indoor air quality and deferred decisions about cleaning indoor spaces to New York City. The city, in turn, delegated those cleaning duties to tenants and building owners who could decide for themselves how much, or even whether, to clean. While some residents hired professionals, others like the Bradleys couldn't afford the costly effort and instead cleaned sporadically cleaned using mops or vacuums in the months following the attacks. "You can't sweep this stuff," says the grandmother of 17. "It's hidden in corners and underneath furniture. I had to buy a cover for the couch because every time my grand kids sit down a light dust rises up."

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[The Air Down There A year after the attacks, concerns linger over the long-term health effects on residents and rescue workers who breathed in contaminated air By Julie Scelfo and Suzanne Smalley NEWSWEEK WEB EXCLUSIVE, 9/6/02, http://www.msnbc.com/news/802911.asp#BODY]

9/4/02

Nina Lavin, a jeweler, is one of those convinced she's living in a poisoned building and is angry that the EPA didn't do more to warn people of the hazards. Her apartment, seven blocks north of the World Trade Center site, faced the towers, and her belongings were coated with dust after the buildings fell. Reassured by EPA chief Christie Whitman's claims two days after the disaster that "there appears to be no significant levels of asbestos in the air in New York City," Lavin followed the New York Department of Health's recommendations to clean up with a mere wet mop and rags. Trusting the agency, she said, turned out to be a mistake. Months later, Lavin couldn't stop coughing

and developed chronic bronchitis, she said.

The building manager refused to pay for a professional cleanup. The Federal Emergency Management Agency turned down her request to be relocated, insisting that her building was "structurally sound." Certain that there was still something wrong, she paid to have her apartment tested, and she found that it contained 12 times the maximum legal level of asbestos.

Lavin is now living in a hotel until her apartment is thoroughly cleaned. But even then, she risks recontamination from other tenants who share the air system in the 460-unit building but who haven't signed up for the scrub-down. "It's really distressing to learn that I've been living with these contamination levels for all these months," Lavin said. "I have no idea what the long-term prognosis is for me or for all of us."

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[A Toxic Legacy Lingers as Cleanup Efforts Fall Short, By Maggie Farley, Los Angeles Times, 9/4/02]

9/30/02

Physicians in the city have made it clear: The malady now officially called World Trade Center cough is like nothing they've ever seen, and hundreds -- perhaps thousands -- of people are experiencing it. The extent of this lung disease is not known, and for a combination of bureaucratic reasons, the extent of the human health impact may be understated. Moreover, cleanup efforts may be inappropriately focused on a single element of the debris: asbestos. The ailment, as described recently by Dr. Kerry Kelly, the New York Fire Department's chief medical officer, is characterized by a reduced lung capacity and a hyper-reactivity of the airways to inhaled particles, bacteria and viruses. The cough is dry and nonproductive and can leave the sufferer gasping for air. . . . Rather, the culprit appears to be microscopic bits of glass.

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[Air of Infirmity, City struggles to contend with widespread WTC cough, NY Newsday, By Laurie Garrett, 9/30/02]

10/1/02

A year after the World Trade Center's collapse, doctors have just begun to get a grasp of the scope - and persistence - of respiratory disorders left in the disaster's wake. Many have even begun to wonder whether more serious illnesses, such as heart disease and cancer, await.

In addition to asthma, a new condition called World Trade Center cough and another relatively new medical disorder known as reactive airways dysfunction syndrome - RADS - are the ailments most commonly treated in firefighters, police officers and others who responded to or lived near the site. RADS is a type of occupational asthma, a wheezing condition that occurs usually after exposure to high concentrations of environmental irritants. It can evolve into full-blown episodes of asthma, studies have shown.

Doctors say a rarer condition - hypersensitivity pneumonitis, also known interchangeably as farmer's lung and coffee worker's lung - may yet be established. The cough is the most common of the post-9/11 respiratory illnesses.

. . .

Terry Algranati, 34, was not in Manhattan on the day of the attack nor did he work on the pile of debris. But he could see smoke rising like a thunderhead over lower Manhattan.

He now has a persistent and debilitating cough, and he and his doctors blame the dust from Ground Zero. On Sept. 12, 2001, Algranati drove to Fort Lee, N.J., to play basketball with friends. His game was cut short by the air's thickness and acrid smell, which caused him to cough. Algranati now has been plagued by the cough for a year. His doctors have no idea whether it will subside, and he now relies on an inhaler. "From that point on I have had trouble breathing," Algranati said. His doctors term the condition preasthma.

And it worsens in certain positions. "When I lay on my back, I get a hacking cough," he said. Algranati, robust and athletic before 9/11, said he had always been healthy. "I never went to doctors that much; never took any medicine. I'm certainly not a hypochondriac. So this has been a real surprise."

Hardest hit were the hundreds of rescuers at Ground Zero. Medical investigators from New York City's fire department and the Centers for Disease Control and Prevention wrote recently in the New England Journal of Medicine that the "clinical and physiological severity [of the cough] was related to the intensity of exposure."
. . .
[Assessing The Scope Of WTC Ailments, Experts study how lung ills may worsen, 10/1/02, by By Delthia Ricks, Newsday, http://www.newsday.com/templates/misc/printstory.jsp?slug=ny%2Ddstop2947197oct01 &section=%2Fnews%2Flocal%2Fnewyork]

11/20/02

Lower Manhattan resident Ilona Kloupte is just one example of the hundreds of residents the Environmental Protection Agency continues to place in danger because of its lack of an acceptable cleanup plan for interiors still contaminated by hazardous dust from the World Trade Center collapse. Today, at a press conference inside her home, Rep. Jerrold Nadler (D-NY) detailed her case - making a stunning argument that the EPA isn't even following its own guidelines - and continued to press the EPA for immediate action.

"Ilona Kloupte is just one example of what life is like for people whose homes are contaminated with hazardous WTC debris, and who must fight with the EPA to get the agency to do its job, and do it right," said Rep. Nadler. Immediately after 9/11, Ms. Kloupte was given was a bucket and a mop after contacting Federal agencies for help. For three days, she scooped up dust, and immediately suffered health problems. Testing found high levels of and numerous hazardous substances. Her doctor advised her not to live in this apartment under these conditions. Left to her own devices, unable to afford a comprehensive cleanup, she has been in a Red Cross Shelter ever since.
. . .
[THE FACE OF EPA NEGLIGENCE Rep. Jerrold Nadler Tours Contaminated Lower Manhattan Home Still Not Clean of WTC Dust; Says Residents Getting The "Most Atrocious of the Atrocious", 11/20/02, http://www.house.gov/nadler/EPA_112002.htm]

2002

During a U.S. Senate subcommittee hearing in February 2002, Miele [NYC Department of Environmental Protection Commissioner]testified that his department had only sixteen employees assigned to asbestos ovdrsight and that his agency had been overwhelmed just by the reuirements necessary to ensure that the city's water supply was safe.

The city's inability to oversee the cleanup created a gaping hole for unscrupulous landlords to perform slipshod abatement, or to do nothing at all. Some owners did perform responsible testing and cleanup, but horror stories abound from downtown residents about shoddy efforts. Eric Mandelbaum, for example, has lived for decades in a luxury apartment building on Gold Street, several blocks east of the trade center. A retired city worker, he is also president of his building's tenant association. He and several other tenants were furious when they returned to their building the week after the attack and discovered that one of their janitors, together with a couple of immigrant day laborers, had been dispatched to use household vacuum cleaners to remove the thick dust that was coating their apartments. "The buildihg management told us that the tenants would have to be there to move our own furniture while these men cleaned," Mandelbaum said.

Marisa Ramirez de Arellano confronted a similar harrowing experience with her ninth-floor apartment at 333 Rector Place in Battery Park City. The day of the attack, large amounts of udst from the collapsed Twin Towers entered the apartment through an open glass sliding door. With the electricity gone, she evacuated for several weeks. The building's management took air samples for asbestos no other contaminants and reported to her that no elevated levels were found. By the end of September she had developed breathing problems. "As soon as I returned to the apartment, my breathing problems worsened," she said. "The apartment had been 'cleaned' but there was still gray dust everywhere." When she complained to the building management they agreed to send a professional cleaning firm to do thejob again. "They brought brooms and a vacuum cleaner; none of them were wearing dust masks or respirators as I would have expected a hazardous material cleaning crew to wear," she wrote in an oficial complaint to the city's Department of Environmental Protection. The workers who arrived were all immigrants who spoke only Spanish and "had no idea how to clean a contaminated room." After the second cleanup, so much dust still remained that she and other tenants arranged for their own testing of the dust. A firm tehy hired reported that the dust contained up to 2 percent asbestos.

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[Fallout. The Environmental Consequences of the World Trade Center Collapse. by Juan Gonzalez. Published by The New York Press, NY, 2002]

1/22/03

Glenn H. Abatemarco got sick two weeks after terrorists attacked the World Trade Center, and he has still not fully recovered his ability to breathe normally. That in itself is not terribly unusual. A lot of people in Lower Manhattan who were exposed to the acrid, alkaline dust and smoke from ground zero developed the persistent pattern of lung irritation known as World Trade Center Cough.

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But Mr. Abatemarco does not fit the pattern, and therein lies a medical mystery. First of all, he lives in Brooklyn, miles from ground zero, and works in Midtown Manhattan, where he is a vice president at a financial services firm. He had no intense exposure from the dust cloud from the towers' collapse and no chronic exposure afterward of the sort that downtown workers and residents faced as smoke from the smoldering fires swirled through the streets. He is 41 and generally fit, his physicians say, and while he had asthma as a younger man, he had not been bothered by it for 17 years.

But he got sick anyway, and did not get well. The only explanation his doctors have been able to come up with aft er three trips to the emergency room, a CT scan, a battery of

allergy tests, a second medical opinion, dozens of days of lost work and a six-week exile in Arizona last fall to try a desert cure is the date his symptoms began. In the scientific borderland where environmental medicine, epidemiology and diagnosis intersect, cases like Mr. Abatemarco's are called outliers.

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As he and three co-workers were fleeing the city heading f or Brooklyn in an open-top Jeep they were coated with material blowing from the site. (None of the co-workers, as far as he knows, became ill.) Dust, visible every morning on his car, also blew around his home in Bensonhurst over the next four or five days. And he was under severe stress in those days, he said along with almost every other New Yorker and stress is known to be a trigger for chronic obstructive pulmonary disease with severe persistent asthma, which is his formal diagnosis.

. . .

"My doctor's diagnosis was that whatever I had sucked in on 9/11 just hypersensitized me," he said. Public health experts say that Mr. Abatemarco's illness underlines how little is known about the consequences of the terror attack. Although a base of expertise and knowledge has developed around the firefighters, downtown workers and residents who got sick, no one can say exactly where the borders of the disaster are. And the questions, they say, go beyond medicine.

Is Mr. Abatemarco a crime victim, for example? Is he entitled to compensation from the State of New York for the thousands of dollars he has spent on medications, not to mention his stay in Arizona, which was not covered by insurance? Or is he just a man who through misfortune and happenstance became ill?

And most important of all, perhaps: are there others like him?

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[Man With Few Trade Center Ties Traces His Asthma to 9/11, By KIRK JOHNSON, 1/22/03, NY Times]

G: EPA 110 LIBERTY STUDY AND DEUTSCHE BANK DEMOLITION – PROOF DO-IT-YOURSELF ABATEMENTS INEFFECTIVE AND UNSAFE

"Did people return . . . without properly cleaning their home of WTC dust? . . . [1/27/03 EPA IG report]

This section discusses two new important pieces of evidence demonstrating that no do-it-yourself cleanup using the NYC DOH guidelines can dependably reduce levels of WTC toxic constituents to even EPA's high benchmarks, much less the lower levels that EPA should be requiring.

The first evidence is EPA's newly released pilot cleaning study at 110 Liberty St, a building on the perimeter of Ground Zero which had its windows blown out.[19] EPA used all of the best abatement procedures known, like abating the whole building inside and outside simultaneously, sealing off windows and vents before abatement and testing, elevating major appliances off the floor and HEPA vacuuming their working parts while simultaneously using specialized brushes, etc. Furthermore, EPA had the fire department come in to do the heavy cleaning before they even started, and the landlord had performed a whole-building professional abatement several months before that.

But even for those apartments with what EPA called "minimal" dust, some apartments could not pass air or wipe tests after one thorough abatement. Some of the more heavily contaminated units were never able to pass EPA's aggressive air testing, even after 3 abatements. After continuing to fail EPA's established aggressive air testing, EPA tried to disown its aggressive air testing techniques, saying they were unrealistic. This is false, and unsupported by any evidence by EPA. If it were established that aggressive air testing was somehow inferior or unrealistic, then EPA would have never used it in the first place for the 110 Liberty St. study. There already would have been EPA documents and changes to the regulations which verified that aggressive testing was no longer appropriate. It was only after-the-fact, finding units that could never pass this test, that EPA tried to claim that aggressive testing was inappropriate.

The second piece of evidence is the the Deutsche Bank building at 130 Liberty St., just 300 feet away from the 110 Liberty St. address. This building was thoroughly abated for mold and pronounced mold-free by the NYC DOH. Ceilings, walls, and carpet were torn out. The building was structurally sound, even though a gash had been cut in one side by the falling towers. However, the owners are going to demolish the building because of the asbestos and other WTC-related toxic constituents it was found too difficult to remove them.

People are now living and working in offices that they believe are safe because they followed the NYC DOH do-it-yourself guidelines, needlessly exposing themselves during the process. They did not take advantage of (or were ineligible for) the EPA voluntary cleanup program.

Participating would have been a lot of extra trouble, and EPA never stressed that it was needed. EPA surrounded the voluntary cleanup program with press releases saying the only purpose was psychological. See Section B of this report for the EPA press releases during the period from 5/8/02 to 12/02.

EPA 110 Liberty St. study shows NYC DOH guidelines cannot remove WTC toxics

The following is a direct quote from a study released 6/4/03 by EPA. A mixed use residential and commercial building at 110 Liberty Street was found by EPA to have hazardous levels of WTC-related contaminants, such as asbestos, lead, silica, and fiberglass. These are EPA's conclusions, not the conclusions of somebody else interpreting the data.

> The pre-cleaning analytical results for all of the data sets listed above were also evaluated to determine if the concentration of contaminants in the dust were elevated above health-based benchmarks. . . . Based on pre-cleaning data, there were ten residential units and five commercial units that exceeded a health-based benchmark for either lead, dioxin, PAH, or some combination of the three compounds.
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> Based on post-cleaning data, an additional three residential units and one common area exceeded a healthbased benchmark for either asbestos, lead, MMVF, or alpha-quartz, or a combination of these compounds.
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> Cumulatively, nineteen sites inside the building or 76 percent exceeded a health-based benchmark for one or more contaminants associated with the WTC collapse. This indicates that some contaminant concentrations exceeded health-based benchmarks.
> . . .
> *[Emphasis added. There were 13 residential units and 6 businesses total.]*
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> *[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, p. 108, http://epa.gov/wtc/confirmation_clean_study.htm]*

EPA had to come back and reclean 2 and 3 different times in the same apartment to get levels down to EPA's benchmarks for some of the WTC cleanup. Even after 3 abatements in some cases with the best equipment available, some of the apartments were never able to meet EPA's criteria for WTC contaminants. In other words, the sophisticated professional abatements did not work.

Of importance is this fact: 7 out of 13 of the apartments only had what EPA described as "minimal" dust; no visible dust except under the baseboard heating units. Still, these apartments with minimal dust had to be re-abated, even after EPA's careful procedures, because they could not pass air and wipe tests.

Difference between 110 Liberty abatement methods and NYC DOH guidelines

The following is an abstract of the abatement methods EPA used at 110 Liberty St. For comparison, see the simple cleaning methods in the NYC DOH guidelines given earlier in this section. There is a night-and-day difference between the two. The abatement methods used by EPA at 110 Liberty are far superior, and could never be performed by any apartment or office tenant by themselves.

> Prior to commencement of cleaning operations, each tenant was contacted for the purpose of scheduling an appointment to determine the tenant's wishes relative to disposition of their belongings. At the appointment, residents were suited with hooded, powered air-purifying respirators (PAPR), which pull ambient air through a filter. The residents were advised of the applicable aspects of the Health and Safety Plan, including dust and respiratory hazards. . . . The residents then accompanied EPA into the apartments to review contents and to discuss the planned disposition of personal property.
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> Both Cedar Street and Liberty Street were closed to traffic after the WTC attack. Tenants were not permitted to enter the building. EPA, other governmental officials, and the building owner had been the only individuals authorized to enter the building since September 11, 2001. Presently, the residential spaces of the building are being re-occupied. The NYC Building Department inspected the building for structural integrity prior to EPA mobilization to the site. The building interior had been professionally cleaned by the building owner, Liberty Street Associates, LLC, shortly after the collapse of the WTC. Those cleaning activities focused on the removal of gross dust and debris. Floors, walls and ceilings were cleaned using HEPA vacuums, AFDs and wet wiping using soap and water. Personal items, such as furniture, clothing, electronics and kitchenware were not cleaned. The cleaning began on October 29, 2001 and was completed on November 11, 2001.
>
> Although the cleaning discussed above took place prior to implementation of the study, there had been significant redeposition of dust that had become airborne during the removal of the WTC- related debris. . . . The New York City Fire Department vacuumed dust from these units just prior to commencement of the study
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> During the initial cleaning, the doors and broken windows facing Liberty Street had been secured with plywood. However, they were not secured in a manner that would sufficiently seal them to prevent the entry of dust being generated during debris removal operations. Likewise, skylights located on the top floors of the building had been damaged and offered a pathway for dust to migrate into the building. These conditions existed during most of the WTC recovery effort.
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> Residents were advised that retention of porous items was not recommended due to the difficulties associated with cleaning and testing. Residents were given the option of having their possessions: cleaned on the spot so the resident could immediately take possession, cleaned later and left in the apartment, or disposed of by EPA.
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> . . .
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> Security. The first cleaning activity in each unit related to the securing of potential access points from air infiltration, such as wall and window mounted air conditioning

units. It was necessary to clean the access points as they were secured, to ensure that use of the access points after cleaning activities would not result in re-contamination. In order to limit unauthorized access to the building and to protect equipment and supplies during daytime work hours, previously damaged windows were secured and the entrance door to the building was continuously monitored. At the end of the work day, the entrance door on the Cedar Street side of the building was locked.

. . .

Intact windows were opened, and the jambs, sashes, and sills were cleaned thoroughly. The windows were then closed. In windows where an air conditioning unit was present, the air conditioning unit was removed from the window. The temporary protection on the exterior of the window was removed. The window cabinet that had housed the air conditioning unit was vacuumed, then covered with plastic to prevent air filtration. The air conditioning unit was vacuumed to remove loose dust, wrapped in plastic, and disposed. Wall mounted air conditioning units were removed from the wall, and sealed in plastic. The wall cabinet that had housed the air conditioning unit was vacuumed, then covered with plastic to prevent air infiltration. The air conditioning unit was vacuumed to remove loose dust, wrapped in plastic, and disposed. Disposal of the air conditioning units and installation of new self-contained ductless systems was performed by the building owner following completion of the study.

. . .

Vacuuming. Vacuuming commenced at the entrance doorway of the unit. Working from the ceiling to the floor, toward the furthest area of the unit, all surfaces were vacuumed of loose dust and debris. Walls, ceilings, doors, pipes, ledges, closets, cabinets, shelving, trim, fixtures, and electrical outlets were vacuumed as they were encountered. Upon reaching the furthest point in the unit, the direction of cleaning was reversed and the same cleaning procedures were followed while returning to the point of origin at the entrance doorway. This procedure accomplished the cleaning of each unit twice using the designated cleaning method.

. . .

Carpet Cleaning **. . .** Two methods were utilized to clean the carpets **. . .** 1) Nilfisk. vacuum with HEPA filtration, and 2) wet vacuuming. Carpets were wet vacuumed in the **. . .** Mattress Store, using standard carpet shampooing equipment available to the public at rental stores. The carpets were cleaned twice. **. . .** Initially, the carpets were cleaned running in the direction of the room from front to back (Liberty Street to Cedar Street). The carpets were then cleaned again, in a direction crossing the room from side to side. Soap (carpet shampoo) and warm water were used in the Mattress Store. **. . .** *[the air tests failed after EPA cleaned the carpet using only industrial HEPA vacuum cleaners, which is more than is recommended in the NYC DOH do-it-yourself guidelines. The tests for asbestos in air were below EPA's criterion only after this special wet vacuuming process.]*

. . .

Wet Wiping. Wet wiping was performed on all horizontal surfaces to remove dust. The WRS cleaning crew applied wet wiping to all horizontal surfaces, including the floor, as they progressed from the furthest point of the interior of the unit back to the door. Wet wiping was the last activity performed in the unit.

. . .

Use of water without soap on horizontal surfaces resulted in smearing and re-deposit of the dirt. Water and ammonia-based cleaner (Windex.) did not smear. **. . .** The work plan initially called for use of soap and water to accomplish wet wiping. Windex® brand was used because it is a commonly used cleaner believed to be readily available in most people's homes. Furthermore, it is non-damaging to most surfaces, from wood to

fiberglass. Typically, this soap does not "over-suds". It provides an effective detergent-based protection of surfaces when combined with cold water.

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Cleaning Air Conditioning Units. . . . *[These were privately owned air conditioning units, in addition to the wall units that the landlord had removed and disposed]* two types of air conditioning systems were used in the residential living spaces: window/wall mounted air conditioners, and ceiling-mounted ductless air conditioners with remote condenser/compressor units. Bathroom fans also presented airflow routes that needed to be cleaned. Ceiling-mounted air conditioners were cleaned using HEPA-filtered equipment. The grills were removed to provide access to the interior. The condenser and compressor units on the roof were visually inspected and found to be clean. Removal of the ceiling cover to access the bathroom fan assemblies was necessary. The fan and motor were vacuumed; the fan housing was wet wiped. The interior of the exhaust duct was vacuumed to the first foot. The unit was reassembled and covered with poly sheeting.

Baseboard heating components, including the hydronic finned radiation systems, were cleaned. The protective covers were removed to expose the heating elements. The fins were then vacuumed and brushed simultaneously to remove dust. The space located under the heating element was vacuumed. The protective covers were reattached.

Cleaning of Refrigerators, Dishwashers and Stoves (including exhaust fans). Prior to cleaning refrigerators, the appliance was unplugged and checked for food contents. If present, food was removed, bagged and disposed. The coils, underbody, compressor compartment, and back of each refrigerator was cleaned. Dust from the cooling coils was cleaned by elevating the appliance and simultaneously using vacuums and specialized brushes. Upon completing these activities the floor area where the refrigerator had been located was cleaned. Prior to cleaning, each stove unit was disconnected from its electric receptacle and gas line. Old exhaust fan lights and filters were removed and replaced. The first foot of the exhaust duct was vacuumed. The stove hood was vacuumed. Prior to cleaning dishwashers, the toe plate was removed and dust was vacuumed from under the appliance. After cleaning, all appliances were staged on plastic for subsequent removal by the owner, who had decided to replace them.

. . .

HVAC systems . . . were cleaned by professional duct cleaning companies using standard cleaning procedures. . . . They mirrored the procedures used by HVAC cleaning companies when responding to ordinary HVAC cleaning requisitions. The following cleaning activities were conducted, in the following order:

1. A clean plastic barrier was installed on the floor surface, three feet to either side of the suspended HVAC system, from the return intake to the furthest supply grill.
2. Access points were selected at the return and supply sides of the duct system. A HEPA filtered vacuum collection system was installed at the end of the supply run to collect internal dust.
3. A rotating brush system was used to dislodge dust in the direction of the vacuum collection system.
4. Degreasing agents were used on the HVAC internal coil units and cleaned. Supply grills were cleaned in a similar fashion.
5. A biocide agent was applied to the duct's internal components and allowed to dry.
6. An encapsulant was applied to the internal surfaces in order to ensure that residual dust was sealed in.
7. The work area was cleaned of all equipment and plastic protection.

8. The system was visually inspected at the air handling unit access panels for view of internal components. The duct work was visually inspected for dust in the return and in the supply lines.

. . .

Common Areas. The common areas were the first areas of the building cleaned, in order to provide a dust-free area for Level D entry through the common spaces, and to provide a safe location for equipment storage. All foyers, stairways, and halls were vacuumed using commercial quality HEPA vacuums. All horizontal and vertical surfaces in the common areas were wet wiped *[with soapy water]* where possible. The common areas were re-cleaned as necessary due to traffic.

Stairwells were cleaned commencing at the Cedar Street doorway vestibule starting in the stairwell at the ground entrance and proceeding to the rooftop access door. The stairwells were then re-cleaned, following the same route back. The ceilings, walls, handrails, balusters, treads, risers, fire protection equipment, lighting, and trim were cleaned.

The hallways of each floor were accessed through fire doors at the stairwell platform for each floor. Access to each floor remained closed until each stair well had been cleaned from bottom to top, and from top to bottom. The hallways were cleaned in the same manner as the stairwells, except that not all of the hallway walls were wet wiped. The second floor hallway floor was covered with vinyl tile. It was wet wiped. However, the third and fourth floor walls were made of plywood. Wallpaper originally applied to the wall surfaces had been removed, leaving a rough paste finish that was not conducive to wet wiping.

Each hallway contained a utility room with a wall-enclosed trash chute that led to the basement of the building. Some items were discovered in the utility closets. Boxes that were unopened were vacuumed and left in place. Other items were packaged for disposal. The utility areas did not seem to be impacted by WTC dust.

An elevator accessing each floor was located on the Cedar Street side of the building. It was not operational for the first two months of the project. Eventual repair of the elevator by others allowed access to the inner compartment. The elevator cab and the exterior top of the cab were vacuumed.

. . .

Basement . . . The basement of the building is comprised of separate rooms: a trash compactor room, a motor room associated with the elevator shaft, a common access area from the street, and a fire protection equipment room. The brick walls of the basement were encrusted with mud, indicating a high water level at some time in the building's history. These rooms were cleaned using commercial HEPA equipment. Loose debris related to stone and mortar deterioration was vacuumed from the walls and ledges of the base of the elevator shaft. Small rocks, paper, debris, and rodent carcasses were removed.

. . .

Cleaning of Building Exterior/Roof. Cleaning of the building exterior and the rooftop was accomplished and monitored by the NYCDEP. NYCDEP hired an asbestos abatement contractor to accomplish this task. Cleaning of the building exterior was initiated at approximately the same time that cleaning of the interior of the building began. NYCDEP subcontractors were required to vacuum and wash the building exterior twice over a two-day period before acceptable results were achieved.

. . .

> Carpet Cleaning . . . Two methods were utilized to clean the carpets in the Chiropractor's Office and the Mattress Store: 1) Nilfisk. vacuum with HEPA filtration, and 2) wet vacuuming. Carpets were wet vacuumed in the Chiropractor's Office and in the Mattress Store, using standard carpet shampooing equipment available to the public at rental stores. The carpets were cleaned twice, sampled, and disposed as porous material. Initially, the carpets were cleaned running in the direction of the room from front to back (Liberty Street to Cedar Street). The carpets were then cleaned again, in a direction crossing the room from side to side.
> . . .
> *[The sentences/paragraphs in this abstract are not necessarily in the same contiguous order as in the EPA study.]*
>
> *[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, http://epa.gov/wtc/confirmation_clean_study.htm]*

EPA false claim that the procedures at 110 Liberty are the same as common cleaning procedures that a citizen could use

The summary section of EPA's 110 Liberty St. study claims that ordinary cleaning by tenants can reduce the levels of toxic WTC dust to safe levels. This is completely false on the face of it. No citizen has the ability to abate whole building inside and outside simultaneously like EPA did, including abatement all parts of any HVAC system, having no personal possessions present during abatement and testing, elevating and brushing the underside of appliances with specialized brushes while simultaneously vacuuming, sealing of entries and abatement areas before and after abatement, etc., etc., etc.

> The study successfully demonstrated that standard cleaning practices are effective in removing the complex mixture of WTC dust, thereby reducing individual exposure to WTC-related contaminants. Therefore, EPA's recommendation continues to be that individuals concerned about the presence of WTC dust use HEPA vacuums and wet wiping to remove the dust from their dwellings. Depending on the amount of dust deposited, repeated cleanings may be necessary.
> . . .
> *[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, page 3, http://epa.gov/wtc/confirmation_clean_study.htm]*

Safety precautions for 110 Liberty St. study compared to NYC DOH guidelines

The NYC DOH guidelines specifically stated that even a common drugstore dust mask, much less a HEPA respirator, was not necessary while cleaning an apartment or office containing the heaviest layers of dust.

On the other hand, the 110 Liberty St. study required that tenants be in full protective gear with an air supplied respirator to just visit their apartments to make decisions about personal possessions before EPA began its cleanup study. This was after 1 professional abatement by the landlord, followed by a preliminary abatement by the fire department just prior to that time. Tenants were not allowed to be present during EPA's abatement of the apartments, and in fact, the whole building was in lock-down during the abatement. Reporters were not even allowed to visit 110 Liberty St. for short periods of time, because they could not be outfitted with custom fit protective gear.

EPA took all of these precautions at 110 Liberty St. even though the dust inside the building was less than 1% asbestos:

> Prior to commencement of cleaning operations, each tenant was contacted for the purpose of scheduling an appointment to determine the tenant's wishes relative to disposition of their belongings. At the appointment, residents were suited with hooded, powered air-purifying respirators (PAPR), which pull ambient air through a filter. The residents were advised of the applicable aspects of the Health and Safety Plan, including dust and respiratory hazards. (The Health and Safety Plan is discussed in Section 2.2 below.) The residents then accompanied EPA into the apartments to review contents and to discuss the planned disposition of personal property.
> . . .
> *[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, NY New York, NY, 5/03, EPA Region 2, http://epa.gov/wtc/confirmation_clean_study.htm]*
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> The U.S. Environmental Protection Agency (EPA) today began sampling for contaminants in 110 Liberty Street, a still-unoccupied building close to the World Trade Center (WTC) site, in what will be a comprehensive test of the effectiveness of various cleanup techniques.
> . . .
> IMPORTANT NOTE TO EDITORS: Due to potential health and safety concerns, workers will be suited up in custom-sized protective gear. EPA cannot allow media access to the building. *[emphasis in the original]*
> . . .
> *[EPA BEGINS WORK ON PILOT WTC DUST CLEANING STUDY, 6/19/02, http://www.epa.gov/wtc/stories/061902.html]*
>
> _____
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> Prior to commencement of the study, bulk samples were collected from three units in the building. Samples were collected from units that contained excessive amounts of dust, in an attempt to characterize the asbestos concentration in dust from worst case locations in the building. Samples were collected from the Chiropractor's Office, the Mattress Store and residential Unit 5C. Analysis of the samples indicated that less than one percent asbestos was present. Therefore, NYC asbestos licensing and certification regulations did not apply to the project. The federal OSHA asbestos standard (29 CFR 1926.1101) did apply to the project. At EPA direction, WRS assigned a team of asbestos-trained personnel to the project. Two licensed supervisors and two licensed

workers were part of the operations team. All field operations personnel had completed all applicable training.

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[Note: EPA left out the health and safety plan for the workers performing the cleaning operations at 110 Liberty St. from the version of the study made available on 6/4/03. There was not enough time to obtain this health and safety plan for review and discussion in this report.]

[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, NY New York, NY, 5/03, EPA Region 2, p. 17, http://epa.gov/wtc/confirmation_clean_study.htm]

110 Liberty St. proves elaborate abatement does not reduce contaminants to EPA benchmarks – 2 and 3 abatements required, even with "minimal dust"

Despite the fact that EPA simultaneous abated all apartments, businesses, common areas, HVAC systems at 110 Liberty St., and the roof and facade, securing the building during abatement to prevent inadvertent recontamination, having a "best case" building without carpeting, and in all but one case without personal possessions present, prior abatements by the landlord and fire department, etc., many of the apartments needed to have 2 or 3 complete abatements to meet EPA's health benchmarks. This was true even for apartments with what EPA called "minimal dust" (no visible dust except under the baseboard heating units). The mattress store did not pass the air tests until after the 4th abatement, when the HVAC system was added on to the abatement routine.

Only 5 out of 13 apartments met health benchmarks after one abatement, and only 75% did after two abatements. Two apartments (2 out of 13, or 15%) required three abatements to meet EPA's criterion for safety. (See Table 12.0, page 111 of the EPA study.) There were 6 apartments classified as having only minimal accumulation of WTC dust. However, 66.66% (two thirds) of these minimally impacted apartments required two abatements to meet EPA's criteria for lead safety. (See table 13.0, page 112 of EPA Region 2 abatement study.)

The following table gives specific abatement information for each apartment in addition to the general procedures EPA used, quoted above from the EPA study.

EPA's 110 Liberty St. Cleaning Study. Procedures in addition to those described above, number abatements necessary to achieve EPA's benchmarks, and presence of WTC dust prior to abatement

APARTMENT	WTC DUST LEVEL BEFORE EPA ABATEMENTS (earlier professional abatement by landlord)	NUMBER	PERSONAL POSSESSIONS OR FURNISHINGS PRESENT	EPA's ABATEMENT METHOD (IN ADDITION TO THE OVERALL BUILDING METHODS DESCRIBED EARLIER, AND THE EARLIER PROFESSIONAL ABATEMENT BY THE LANDLORD)
5C	significant	3	No, 1 couch. No carpet, hardwood floors.	An industrial HEPA-filtered vacuum for the 1st 2 abatements. For 3rd abatement, an industrial HEPA filtered vacuum and an air filtration device (AFD) Horizontal surface wet wiped with soap and water.
5A	**minimal** (no visible dust except baseboard heating units)	**2**	No, 1 couch. No carpet, hardwood floors.	An industrial HEPA filtered vacuum and an air filtration device (AFD) Horizontal surface wet wiped with soap and water.
3C	significant	3	No, 1 couch. No carpet, hardwood floors.	Craftsman. shop vacuum and a Eureka upright vacuum with no HEPA filter for 2 abatements. For 3rd abatement, an industrial HEPA filtered vacuum and an air filtration device (AFD). Horizontal surface wet wiped with soap and water
3D	significant	2	no, 1 couch & chair. No carpet, hardwood floors.	Craftsman. shop vacuum and a Eureka upright vacuum with no HEPA filter for 2 abatements. Horizontal surface wet wiped with soap and water.
4D	significant	2	no, 1 chair & ottoman. No carpet, hardwood floors.	A Craftsman shop vacuum and Eureka upright vacuum with a HEPA filter for vacuuming the floors and other surfaces. Horizontal surface wet wiped with soap and water.
4C	significant	1	no, 1 couch. No carpet, hardwood floors.	Craftsman. shop vacuum and a Eureka upright vacuum with no HEPA filter. Horizontal surface wet wiped with soap and water
2B	**minimal** (no visible dust except baseboard heating units)	**1**	no, 1 couch. No carpet, hardwood floors.	An industrial HEPA-filtered vacuum. Horizontal surface wet wiped with soap and water..
2A	**minimal** (no visible dust except in baseboard heating units)	**2**	no, 1 couch & chair. No carpet, hardwood floors.	A Ridgid shop vacuum and Hoover. upright vacuum for vacuuming the floors and other surfaces. Horizontal surface wet wiped with soap and water
5D	significant	1	no, 1 couch. No carpet, hardwood floors.	An industrial HEPA filtered vacuum and an air filtration device (AFD). Horizontal surface wet wiped with soap and water.
3B	**minimal** (no visible dust except baseboard heating units)	**2**	Yes. No carpet, hardwood floors.	An industrial HEPA filtered vacuum and an air filtration device (AFD). Upholstered furniture cleaned with water extraction process. Horizontal and vertical surface wet wiped with soap and water. Ceiling vacuumed and other surfaces not wet wiped vacuumed 2 times. Personal items and furniture were in the unit cleaned. Paper and books HEPA vacuumed.
3A	**minimal** (no visible dust except baseboard heating units)	**1**	yes, carpet	A Craftsman shop vacuum and a Eureka upright vacuum with HEPA filter. An air filtration device (AFD) was used during the abatement process. Horizontal and vertical surface wet wiped with soap and water.
4A	**minimal** (no visible dust except baseboard heating units)	**2**	no, 1 couch. No carpet, hardwood floors.	A Craftsman shop vacuum and Eureka upright vacuum with a HEPA filter for vacuuming the floors and other surfaces. Horizontal surface wet wiped with soap and water.
4B	**minimal** (no visible dust except baseboard heating units)	**2**	no. No carpet, hardwood floors. No soft materials like couches.	A Ridgid shop vacuum and Hoover upright vacuum with a HEPA filter for vacuuming the floors and other surfaces. An air filtration device (AFD) was used during the abatement process. Horizontal surface wet wiped with soap and water.

Apt. 5C, abatement of an apartment with "significant" WTC dust

Apartment 5C is located on the fifth floor. It is a 968 sq. ft. loft with three separate bedrooms facing the WTC. The apartment has hardwood floors. Windows were blown in. There was significant accumulation of dust in the dwelling. All of the tenant's personal items were removed prior to abatement. The windows were sealed and the bathroom fan vent was also sealed. There was no HVAC system supplying this apartment. Thus, this apartment presented a best-case scenario for any air testing afterwards, since the major reservoirs for asbestos and other airborne contaminants were removed: *i.e.*, no carpet, sealed windows, no personal possessions, and any vents sealed off.

Abatement Methods: In addition to the procedures used throughout the building described earlier in this section, this apartment was abated the first 2 times using an industrial HEPA-filtered vacuum for vacuuming the floors and other surfaces. All horizontal surfaces were wet wiped with soapy water. The apartment failed testing even after 2 abatements.

For the 3rd abatement, An air filtration device (AFD) was added. An AFD is a local exhaust system with HEPA filtration that is capable of creating and maintaining a negative pressure differential between the outside and the inside of the work area. The AFD functions as a stand-alone piece of equipment in a room. The AFD was used as an air-polishing device, to capture dust particles that became airborne as a result of disturbances caused by the abatement activities.

Asbestos: After the 1st abatement, 3 air samples were analyzed using both PCM and PCMe. One air sample exceeded the NYC DOH criterion level of 0.01 f/cc, the approximate equivalent of the AHERA clearance level of 70 s/mm^2. This air sample showed asbestos levels of 0.015 f/cc. In other words, even after a rigorous professional abatement by EPA as described above, an air test showed asbestos levels exceeding the lenient NYC DOH standards, and far exceeding EPA's criteria of 0.009 S/cc PCMe.

After the 1st abatement, air was also tested to see if it met EPA's criteria for asbestos in air that might protect against an excess cancer risk of 1 in 10,000. This is the ten-to-the-minus four, or 10^{-4} risk level. This level is 0.0009 S/cc "PCMe" PCM-equivalents. The laboratory was unable to provide any results, because the filter was overloaded and asbestos fibers could not be seen.

After the 2nd abatement, EPA tried to perform 3 different types of air tests by the PCM, TEM AHERA, and PCMe methods. None of the asbestos air tests could be read by the analysis, because all of the filters were overloaded. .

After the 3rd abatement, the PCMe results indicated that two samples, collected under EPA's aggressive sampling methodology, were above the primary clearance criterion of 0.0009 S/cc with results of 0.0015 S/cc and 0.0016 S/cc.

EPA chose to ignore the results from the aggressive air testing showing asbestos levels over EPA's criteria, and not perform any additional abatement in Apt. 5C. The aggressive air sampling method uses a leaf blower to stir up any surface dusts. The aggressive air sampling method is part of the asbestos in schools regulations. At least EPA did not claim that Apt. 5C passed EPA's set criteria for apartment abatement after the WTC disaster. EPA still admitted that this apartment failed for asbestos in air. The following is a direct quote from the EPA study:

> Cleaning Results With the exception of asbestos, this apartment *[5C]* met the clearance criteria listed in Table 1.0 for each compound after being cleaned three times.

Wipe and micro vacuum results for asbestos: Prior to any abatements, both wipe and micro vacuum samples showed that there was asbestos on/in hard and porous surfaces. After abatement, the results for two of the three micro vacuum samples indicate that asbestos was present at levels similar to those observed before abatement. The third micro vacuum sample was reported as being below the detection limit.

Dioxin: Before Abatement Samples Three pre-cleaning wipe samples were collected and analyzed for dioxin. The results indicate that dioxin was present; however, the TEQ concentration for each sample was below the primary clearance criterion of 4 ng/m^2.

Lead: Before Abatement Samples Three micro vacuum samples and three wipe samples were collected. Lead was detected in all three micro vacuum samples at concentrations above (approximately four to six times) EPA's criterion of 25 $\mu g/ft^2$. Two of the three wipe samples had detectable concentrations of lead above the primary clearance criterion of 25 $\mu g/ft^2$, while the third was below the primary clearance criterion.

After the 1st abatement, two air samples were below the primary clearance criterion of 1.0 $\mu g/m^3$. However, they were above the background clearance criterion of 0.1 $\mu g/m^3$ for lead in air. EPA changed its clearance level for lead in air midway through its study. Previously, it was set for established background levels of lead in air (0.1 $\mu g/m^3$). EPA probably found this was a difficult cleanup level to achieve, and changed it to 1.0 $\mu g/m^3$, which is 10 times higher.

Fiberglass (man-made vitreous fiber, or MMVF): Post 1st abatement air samples Three air samples and five wipe samples were collected after the 1st abatement. The results indicate that fiberglass was present in all three, with two samples being above EPA's criterion of 10 S/L. The third was below the primary clearance criterion. Post 2nd Abatement Five air samples were collected after the 3rd abatement. The results indicate that the two of the five samples were above EPA's clearance criterion. Only after the 3rd abatement were fiberglass air concentrations reduced below EPA's criterion.

Before any abatement, wipe samples showed that fiberglass was present. After the 1st abatement, five wipe samples indicated that fiberglass was still present at concentrations similar to or higher

than the pre-abatement samples.

Polynuclear aromatic hydrocarbons (PAH's): Before abatement, 1 out of 3 wipe samples had 4 PAH compounds detected. The calculated toxicity equivalency factor (TEF) was 303.5 $\mu g/m^2$. This was above EPA's clearance criterion of 300 $\mu g/m^2$. After the 1st abatement, the PAH concentrations were below EPA's clearance criterion.

Apt. 5A, a "minimally" impacted apartment

EPA itself described this apartment as "minimally impacted." This apartment was only able to meet EPA's clearance criteria after being abated twice.

This apartment is on the fifth floor. It is a 1,404 sq. ft. loft facing Cedar Street with one bedroom. The apartment has hardwood floors and no carpet. One window had been blown in, but had been boarded up with plywood by the landlord. The apartment was professionally abated by the landlord along with all other apartments during the months of October through November, 2001. However, the removal of debris from Ground Zero had generated additional dust which had infiltrated the building prior to the EPA cleaning study. The fire department cleaned the apartment just prior to EPA's study.

The dwelling presented minimal accumulation of dust (no visible dust), except for under the baseboard-heating units. The windows were sealed and the bathroom fan vent was also sealed. There was no HVAC system supplying this apartment. Thus, this apartment presented a best-case scenario for any air testing afterwards, since the major reservoirs for asbestos and other airborne contaminants were removed: *i.e.*, no carpet, sealed windows, no personal possessions, and any vents sealed off.

Abatement Methods In additi on to the whole-building inside and outside abatement procedures described earlier, this apartment was abated using an industrial HEPA-filtered vacuum. In addition, an air filtration device (AFD) was used during abatement. An AFD is a local exhaust system with HEPA filtration that is capable of creating and maintaining a negative pressure differential between the outside and the inside of the work area. The AFD functions as a stand-alone piece of equipment in a room. The AFD was used as an air-polishing device, to capture dust particles that became airborne as a result of disturbances caused by the abatement activities. In addition, all horizontal surfaces were wet wiped with soapy water.

Asbestos: Before Abatement Samples Seven micro vacuum and four wipe samples were collected for analysis of asbestos. These samples indicate that asbestos was present in the apartment prior to abatement. Chrysotile was detected in six of the seven micro vacuum samples

and all four of the wipe samples.

After the 1st abatement, three air samples, seven micro vacuum samples, and five wipe samples were collected. Three air samples were analyzed using EPA's special benchmark for asbestos in air after the WTC collapse. This benchmark is designed to be protective for an excess cancer risk of 1 in 10,000, assuming 35 years of exposure. The EPA study refers to this particular air testing method as the "PCMe" test, which stands for phase contrast microscopy equivalents. After the 1st abatement, the air samples were "at or below the primary criterion of 0.0009 S/cc" according to EPA.

At this point in time, we do not know what EPA meant by "at the criterion of 0.0009 S/cc" because Table 11.1 of the EPA report has deleted all the air asbestos results for Apt. 5A. Furthermore, the other table which also should have included the data, Table 11.2 for Apt. 5A also is blank where it should have given the asbestos air test data for Apt. 5A. The word "at" could mean slightly exceeding the EPA criterion. Furthermore, we do not know whether 1 or 2 of the 3 samples were "at" the EPA criterion. There was not enough time to obtain the relevant information from EPA for inclusion in this report.

Of great interest is the fact that EPA found that after the 1st abatement, 7 micro vacuum samples for asbestos "varied and were present at levels higher and lower than before cleaning." In other words, the asbestos levels on porous surfaces were higher in some cases after EPA's rigorous full asbestos abatement. As discussed later in this report, EPA should have used its ultrasonification extraction method, and was criticized before the 110 Liberty Street study for using the microvacuum sampling method instead of EPA's ultrasonification method.

For several of the other apartments at 110 Liberty, the microvacuum sample results for asbestos were higher than before abatement, or the same as before abatement. All of the microvacuum sampling results were missing from the EPA study, and there was not enough time to get them for inclusion in this report.

Lead: Before abatement, all 3 wipe samples had detectable concentrations of lead, two of which were above EPA's primary clearance criterion of 25 µg/ft2. After EPA's 1st abatement, 2 out of 4 wipe samples exceeded the primary clearance criterion for lead. After EPA's 2nd abatement, lead wipe samples were below EPA's level.

Fiberglass (man-made vitreous fiber, MMVF): Before EPA's abatement, 3 wipe samples were collected. MMVF was detected in all 3 of the samples. Post 1st Abatement Samples Three air samples and five wipe samples were collected after the 1st abatement. After the 1st abatement, MMVF was found in air samples (no air samples were taken prior to the 1st abatement). The results were below EPA's clearance criterion of 10 S/L. The results of the five wipe samples indicate that MMVF continued to be present in all of five of the samples after the 1st abatement.

Simultaneous abatement of HVAC system necessary, 110 Liberty St. study proves

There was an HVAC system for the stores in the building, but not for the apartments. The mattress stored was rigorously abated three times by EPA, but still failed testing. It was only after the whole central heating and ventilation system (HVAC) was abated that EPA was able to lower asbestos levels in air to meet EPA's WTC criterion.

Mattress store, before abatement

In the mattress store, prior to any abatements, even though the dust contained less than 1% asbestos, the air levels were higher than 0.01 f/cc PCM, which is the light microscope regulatory clearance level under AHERA.[20] This level is also the NYC DOH clearance level. The NYC DEP had instructed landlords that there was no problem if the dust itself contained less than 1% asbestos, and that they only needed to test the dust, not the air, since the NYC DEP and EPA had tested the air outside and found it to be safe. See Section E.

This level of 0.01 f/cc PCM is more than 10 times higher than the level EPA set for the cleanup of WTC dusts in buildings (the PCMe level of 0.0009 S/cc). EPA was not able to determine the PCMe level for ½ of the samples, because the filters were overloaded with particulates and could not be read by the analyst.

> Four air, seven micro vacuum, and three wipe samples were collected for asbestos. The air samples were analyzed for PCM and PCMe. The PCM results indicate that two of the samples were above and two of the samples were below the secondary numeric criterion of 0.01 f/cc. The PCMe results indicate that two of the samples could not be analyzed due to overloading of particulate material. The remaining two samples were below the detection limit and below the primary clearance criterion of 0.0009 S/cc. All seven of the micro vacuum samples and all three of the wipe samples detected chrysotile.

Mattress store, results after 1st failed abatement

For the 1st abatement, a professional quality HEPA vacuum was used for the carpet, walls, and all other surfaces. An air filtration device (AFD) was used at the same time as the HEPA vacuuming. An AFD is a local exhaust system with HEPA filtration that is capable of creating and maintaining a negative pressure differential between the outside and the inside of the work area. The AFD functions as a stand-alone piece of equipment in a room. The AFD was used as an air-polishing device, to capture dust particles that became airborne as a result of disturbances caused by the abatement activities.

The air and surfaces were tested for asbestos after this 1st abatement. EPA was unable to determine whether its WTC criteria for air was met, because the filters were overloaded again in

the PCMe test. In addition, wipe samples of smooth surfaces demonstrated that asbestos dusts were higher than before EPA did its 1st abatement.

> Three air samples, seven micro vacuum samples and four wipe samples were collected for asbestos. The air samples were analyzed for PCM, TEM AHERA, and PCMe. The PCM results indicate that all three samples were below the secondary numeric criterion of 0.01 f/cc. The TEM AHERA results indicate that two of the samples could not be analyzed due to overloading of particulate material. The remaining sample was below the secondary numeric criterion of 0.0022 S/cc. The PCMe results indicate that two of the samples could not be analyzed due to overloading of particulate material. The remaining sample was below the primary clearance criterion of 0.0009 S/cc.
>
> The results of the seven micro vacuum samples indicate that asbestos was present at concentrations lower than those observed before cleaning. The results of the wipe samples indicate that asbestos was present in all four samples at higher concentrations than those observed before cleaning.
> *[EPA calls this the "Post 1st cleaning Test 4A results"]*

Mattress store, results after 2nd failed abatement

For the 2nd abatement, EPA repeated the HEPA vacuuming with the simultaneous use of an AFD. This time, however, EPA added wet wiping for all walls and horizontal surfaces.

As seen below, the asbestos concentrations by the PCM test were still over 0.01 f/cc PCM. And again, the filters were overloaded with so much particulate that EPA was unable to determine whether the sample was over the 0.0009 S/cc PCMe criteria, or even the AHERA TEM level of 70 s/mm^2. The asbestos wipe samples also showed that asbestos was present at levels higher than before any abatement.

> Three air samples and four wipe samples were collected for asbestos. The three air samples were analyzed using PCM, TEM AHERA, and PCMe. The PCM results indicate that two samples could not be analyzed due to overloading of particulate material and one sample was above the secondary numeric criterion of 0.01 f/cc. The TEM AHERA and PCMe analyses could not be analyzed due to overloading of particulate matter.
>
> Asbestos was present in three of the four wipe samples at higher concentrations than those observed before cleaning

Mattress store, results after 3rd failed abatement

For the 3rd abatement, EPA again repeated the HEPA vacuuming, AFD, and wet wiping in the mattress store, as well as wet wiping. However, this time EPA added a hot water wet extraction process with carpet shampoo for the carpet.

Even after this 3rd abatement, the air tests failed EPA's criteria for asbestos (0.009 S/cc PCMe).

> Five air and seven micro vacuum samples were collected. Five air samples were analyzed using PCM, TEM AHERA, and PCMe. The PCM results indicate that all five samples were below the secondary numeric criterion of 0.01 f/cc. The TEM AHERA results indicate that all five samples were below the secondary numeric criterion of 0.022 S/cc. The PCMe results indicate that all five samples were above the primary clearance criterion of 0.0009 S/cc. *[The EPA study omitted the actual results for the air testing from its tables. There was not enough time to obtain this information from EPA for inclusion in this report.]*
>
> The results of the seven micro vacuum samples indicate that asbestos was present in concentrations above the detection level in four of the seven samples. However, post-cleanup sample concentrations were lower than those observed before cleaning and after Test 4A cleaning *[1st cleaning]. [EPA did not repeat the wipe test for asbestos, which had showed higher levels of asbestos after both the 1st and 2nd cleanings than before any cleanings.] [EPA calls this the "Post 1st cleaning Test 4C results"]*

Mattress store, results of 4th abatement which finally included the HVAC system

It was only after EPA repeated all of the abatements and added on the abatement of the heating, ventilation, and air conditioning system that EPA was able to achieve its asbestos criterion level.

EPA study shows WTC air will fail 10^{-4} risk level, but not AHERA level

The 110 Liberty St. study shows that the AHERA level of 70 s/mm^2 for asbestos in air is easier to achieve than EPA's WTC criterion of 0.0009 f/cc PCMe (the 10^{-4} risk level for a 30 year exposure). There have been claims that the asbestos from the WTC was so finely pulverized that there would not be any significant fraction of fibers longer than 5 µm, and exposures to WTC asbestos are harmless. The EPA 110 Liberty St. study disproves this theory.

PCMe is "phase contrast microscopy equivalents," an air test that uses an electron microscope (TEM, or transmission electron microscopy), but ignores any asbestos fibers shorter than 5 micrometers (5 µm, which is the same as 5 microns). EPA current policy is that any fibers shorter than 5 µm are not carcinogenic, because they are cleared from the lung. (See the Section U which addresses this theory.)

The AHERA level of 70 s/mm^2 is the same as 0.0022 s/cc, if it is assumed that 1200 liters of air are sampled. This includes all fibers, including those shorter than 5 µm.

The following excerpts from the study show that air levels were either "at" or above the EPA criterion of 0.0009 S/cc PCMe, but below the AHERA TEM level of 0.0022 s/cc.

Unit 2A This unit i s located on the second floor. It is a 1,335 sq. ft. loft with one bedroom facing Cedar Street. The unit has hardwood floors. The unit presented minimal dust accumulation in the dwelling with the exception of the baseboard-heating units. The windows were not blown in. All personal items were disposed except for a couch and chairs.

. . .

Post 2nd Cleaning Samples . . . The TEM AHERA results were all below the secondary numeric criterion of 0.022 S/cc; *[the equivalent of 70 s/mm^2, the AHERA level]* two of the six samples were below the detection limit. The PCMe results were at or below the primary clearance criterion of 0.0009 S/cc . . .

. . .

Unit 4C This unit i s located on the fourth floor. It is a 655 sq. ft. open loft that faces the WTC site. The windows were blown in and there was significant dust accumulation in the dwelling. The unit has hardwood floors and no carpet. All personal possessions to be retained by the tenant were vacuumed and bagged.

Post 1st Cleaning Samples . . . The TEM AHERA results were above the detection limit but were below the secondary numeric criterion of 0.022 S/cc. Two of the three air samples analyzed using PCMe were below the primary clearance criterion of 0.0009 S/cc. The third air sample detected chrysotile and was present at the primary clearance criterion of 0.0009 S/cc.

. . .

Unit 4D This unit i s on the fourth floor. It is a 968 sq. ft. open loft facing the WTC site. The unit had windows blown in and presented a significant accumulation of dust. The dwelling has hardwood floors with no carpet. All personal possessions to be retained by the tenant were vacuumed and bagged.

Post 1st Cleaning Samples . . . The TEM AHERA results indicate that all three samples were below the secondary numeric criterion of 0.022 S/cc. The PCMe results indicate that two of the three air samples were below the primary clearance criterion of 0.0009 S/cc. The third sample detected chrysotile and was at the primary clearance criterion of 0.0009 S/cc.

. . .

Unit 5C This unit is located on the fifth floor. It is a 968 sq. ft. loft with three separate bedrooms facing the WTC. The unit has hardwood floors. Windows were blown in. There was significant accumulation of dust in the dwelling. All of the tenant's personal items were removed prior to cleaning. . . . The results for two of the three micro vacuum samples indicate that asbestos was present at levels similar to those observed before cleaning. The third micro vacuum sample was reported as being below the detection limit.

. . .

Post 3rd Cleaning . . . The TEM AHERA results had chrysotile detected above the detection limit; however, all four results were below the secondary numeric criterion of 0.022 S/cc. . . . The remaining two samples, collected under an aggressive sampling methodology, were *[1 ½ times EPA's]* clearance criterion of 0.0009 S/cc with results of 0.0015 S/cc and 0.0016 S/cc. The results obtained from the samples collected with the modified-aggressive sampling were used as evidence of meeting the primary clearance criterion.

. . .

Chiropractor's Office This is a 716 sq. ft. office space with four examination rooms facing the World Trade Center site. All front windows were blown in. Significant amounts of dust were present on all horizontal and vertical surfaces. Floor areas were covered

with wall-to-wall carpeting. The suspended ceiling was covered with fibrous tiles. There was a two-foot high void space above the ceiling. The space above the suspended ceiling contained the HVAC system and wood floor joist system for the third floor apartments. This area contained WTC-related and non-WTC- related dust. The space was extremely difficult to clean due to the presence of electrical wires, recessed lighting fixtures, sprinkler systems, and the dry, friable nature of the wood support system. Ceiling tiles, flexible ventilation ducts and office equipment were disposed of prior to cleaning.

. . .

Post 1st Cleaning Samples (Test 4C) . . . The TEM AHERA results indicate that three of the five samples could not be analyzed due to overloading of the filters with particulate material. The remaining two samples were below the secondary numeric criterion of 0.022 S/cc. The PCMe results indicate that three of the five air samples analyzed could not be analyzed due to overloading of particulate matter. The remaining two PCMe results indicate that one sample was below the primary clearance criterion and one sample exceeded the primary clearance criterion of 0.0009 S/cc at 0.0033 S/cc.

. . .

[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, http://epa.gov/wtc/confirmation_clean_study.htm]

Amount asbestos/fiberglass on surfaces not related to thickness of dust layer

EPA's cleaning study at 110 Liberty St. demonstrates clearly that the amount of visible dust on surfaces does not necessarily correlate with the total amount of asbestos or fiberglass on the surface. However, there does appear to be a stronger correlation between the total amount of lead on the surface with the amount of dust present.

The following tables from the EPA study[21] shows the ranking of the amount of asbestos, lead, and fiberglass in surface dusts in the 13 apartments studied, before any abatement by EPA. You can see that many of what EPA itself classified as "minimally impacted" apartments, which had no visible dust except under the baseboard heating units, had higher concentrations of asbestos and fiberglass that the apartments with "significant" dust accumulations. This fact totally disproves EPA's claims that only thick layers of dust that could be measured with a ruler required professional abatement.

On the other hand, apartments at 110 Liberty St. with heavier visible dust layers generally also had higher lead concentrations in surface dusts. A logical explanation is that the lead component of the dust is heavier and less likely to become resuspended. The particle size of the lead component may also be larger. However, asbestos and fiberglass are lighter and more aerodynamically stable. The 110 Liberty St. address was boarded up and shut for many months. The asbestos and fiberglass, but not the lead, could have become resuspended and settled in other parts of the building. An alternative explanation could be that the lead component of the dust was deposited at one point in time with the major accumulations of dust mass, while the asbestos and fiberglass entered the building at later dates from the outside.

Regardless of the explanation, this EPA data does demonstrate that there is not a 1 to 1 correlation with the amount of visible WTC dust and the amount of asbestos and fiberglass. Thus, it is highly imprudent to assume that there are no hazards or lesser hazards just because there is less visible dust, or that professional abatement or EPA's more stringent Scope B cleanup should only apply where there is visible WTC dust.

The summary section of EPA's 110 Liberty study claims that there is a good correlation of visible dust and all contaminants. This is a false conclusion and not proven by EPA's own data.

Ranking by Asbestos Wipe Results

"**minimally impacted**" (no visible dust except under baseboard heaters) apartments are in **boldface** type

Apt. #	Rank	**Asbestos Wipe**	Lead Wipe	Lead Microvac	Fiberglass Wipe
5A	1	**65,290**	732	2	799
3D	2	60,623	81	20	601
5C	3	35,021	129	177	687
3C	4	34,030	268	72	477
2B	5	28,092	40	3	4,731
2A	6	**16,607**	34	6	787
4C	7	14,242	88	75	477
5D	8	9,651	17	38	441
4D	9	8,861	52	61	830
4B	10	**7,911**	25	n/a	501
3A	11	**2,962**	19	5	515
3B	12	**2,566**	9	5	1,259
4A	13	**2,368**	12	5	401

Ranking by Fiberglass Wipe Results

"**minimally impacted**" (no visible dust except under baseboard heaters) apartments are in **boldface** type

Apt. #	Rank	Asbestos Wipe	Lead Wipe	Lead Microvac	**Fiberglass Wipe**
2B	1	28,092	40	3	**4,731**
3B	2	2,566	9	5	**1,259**
4D	3	8,861	52	61	830
5A	4	65,290	732	2	**799**
2A	5	16,607	34	6	**787**
5C	6	35,021	129	177	687
3D	7	60,623	81	20	601
3A	8	2,962	19	5	**515**
4B	9	7,911	25	n/a	**501**
3C	10	34,030	268	72	477
4C	11	14,242	88	75	477
5D	12	9,651	17	38	441
4A	13	2,368	12	5	**401**

Ranking by Lead Wipe Result

"**minimally impacted**" (no visible dust except under baseboard heaters) apartments are in **boldface** type

Apt. #	Rank	Asbestos Wipe	**Lead Wipe**	Lead Microvac	Fiberglass Wipe
5A	1	65,290	**732**	2	799
3C	2	34,030	268	72	477
5C	3	35,021	129	177	687
4C	4	14,242	88	75	477
3D	5	60,623	81	20	601
4D	6	8,861	52	61	830
2B	7	28,092	**40**	3	4,731
2A	8	16,607	**34**	6	787
4B	9	7,911	**25**	n/a	501
3A	10	2,962	**19**	5	515
5D	11	9,651	17	38	441
4A	12	2,368	**12**	5	401
3B	13	2,566	**9**	5	1,259

Ranking by Lead Microvac Result

"**minimally impacted**" (no visible dust except under baseboard heaters) apartments are in **boldface** type

Apt. #	Rank	Asbestos Wipe	Lead Wipe	**Lead Microvac**	Fiberglass Wipe
5C	1	35,021	129	177	687
4C	2	14,242	88	75	477
3C	3	34,030	268	72	477
4D	4	8,861	52	61	830
5D	5	9,651	17	38	441
3D	6	60,623	81	20	601
2A	7	16,607	34	**6**	787
3A	8	2,962	19	**5**	515
3B	9	2,566	9	**5**	1,259
4A	10	2,368	12	**5**	401
2B	11	28,092	40	**3**	4,731
5A	12	65,290	732	**2**	799
4B		7,911	25	N/A	501

Asbestos not an indicator of lead – 110 Liberty St. study demonstrates fact

Before abatement, only 23% of apartments had safe levels of lead (only 3 out of 13 apartments had safe levels). Most of the apartments (7 out of 13) did not even have visible WTC dust, except around the heating baseboards.

Asbestos testing was not a good enough indicator of whether hazardous lead levels had been abated. 18% of the apartments which still had hazardous levels of lead after one EPA abatement passed the asbestos test, but not the lead test. In other words, if EPA had relied only on asbestos testing to determine whether lead was still present at hazardous levels, then a significant number (18%) of apartments that had high lead would have gone unnoticed. The EPA 110 Liberty St. study concluded the following, which is totally false and unsupported by the data:

> The study found that conducting asbestos in air sampling after cleaning could be used as a surrogate method for determining if future cleaning was needed.
> . . .
> *[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, NY New York, NY, 5/03, EPA Region 2, p. 114, http://epa.gov/wtc/confirmation_clean_study.htm]*

Undoubtedly, EPA put this knowing false claim into the conclusion section of its 110 Liberty St. study because the EPA voluntary cleanup program, already in progress, was only testing for asbestos. The 110 Liberty St. results came after the EPA cleanup program was set up with its intentions to only test for asbestos had been announced to the public. EPA had a vested interest in justifying the asbestos-only testing in EPA's cleanup program.

Failure to Warn

EPA had the results of the 110 Liberty St. study by the third week in October, 2002. (See page 17 of EPA study.) They had all of the air tests and dust test results, because they needed this information to determine whether the abatement was complete. They knew that even apartments containing minimal dust was resulting in hazardous conditions after one abatement, and they knew that the dust itself contained less than 1% asbestos.

They knew that their extraordinary abatement measures, including taking appliances out from the wall, elevating them and using specialized brushes while simultaneously HEPA vacuuming, abating the roof, facade, common areas twice, abating the HVAC systems and all units at the same time, sealing off units after abatement to prevent recontamination, removal of furniture and personal belongings prior to abatement and testing, etc., was not always successful in bringing asbestos, lead, and fiberglass levels down to even EPA's lenient benchmark levels. They knew

they were having to clean the majority of units 2 or 3 times to achieve their benchmarks.

But they did nothing with this information. They did not issue a press release alerting the public saying that homes and businesses in NYC that had only been cleaned with the NYC DOH do-it-yourself guidelines would not be clean enough, and needed additional abatement. They did not say that their new study demonstrated that any prior cleanings by individual tenants on single units, instead of on a whole building basis, was very unlikely to have been successful. Instead, they issued press releases during this period saying that EPA's voluntary cleanup program was only for psychological reasons, to soothe the "jittery nerves" of citizens. As a result, a very small percentage of eligible residents signed up for EPA's free cleanup program, or coordinated simultaneous whole-building cleanups.

EPA was silent about the 110 Liberty St. study, and let the December 2002 deadline slip away for sign up for free cleanup program. At the time, citizen groups were actively lobbying for an extension of the time limit. At a NYC council hearing on 12/17/02, EPA's Kathleen Callahan, Acting Deputy Regional Administrator, testified that EPA would not extend the deadline for signing up for the cleanup program, saying "citizens could use their own HEPA vacuums to clean it up themselves." At this time, EPA knew full well the results of its 110 Liberty St. study showed that even the most extraordinary professional abatements procedures could not dependably clean apartments to meet even EPA's lenient criteria.

The summary section of EPA's 110 Liberty St. study also constitutes a failure to warn, because it is false and misleading, misrepresenting the actual results of the study. The 110 Liberty St. study shows the amount of dust that can be seen visually does not necessarily correlate with the hazards. The EPA summary stated:

> The observation of WTC dust is good indicator that WTC contaminants may be present and that the amount of WTC dust correlates with the level of contamination.

Even after 3 abatements (which only started after initial abatements by the landlord and then the fire department), EPA was unable to reduce contaminants below EPA's lenient health criteria. The following is EPA's claim that the abatements worked in all cases, followed by a contradictory statement admitting that at least one apartment never passed EPA's criteria. One apartment could not pass EPA's air test for asbestos using aggressive sampling even after 3 abatements.

> The use of a standard cleaning method of vacuuming and wet wiping significantly reduced levels of WTC related contamination with each cleaning event and was successful in reducing concentrations to levels below health based benchmarks.
>
> In some cases, multiple cleaning sessions (2 or 3) were necessary to reduce contamination. The methods were highly effective in reducing all COPCs below health based benchmarks.
>
> . . .
>
> Based on post-cleaning data, an additional three residential units and one common area

> exceeded a healthbased benchmark for either asbestos, lead, MMVF, or alpha-quartz, or a combination of these compounds.

EPA's summary section claimed that asbestos testing was a good indicator of all other contaminants. The study results contradict this claim. Out of 13 apartments, 2 failed testing for lead, but not asbestos. Also, a hallway failed for airborne quartz, but not asbestos.

> Asbestos in air is a good indicator of whether additional cleaning is needed. Based on the compounds and testing methods chosen, the data suggests that using asbestos air samples as an indicator for additional cleaning is the most sensitive of the testing methods, as it resulted in the largest percentage of additional cleanings.

Ground Zero Task Force study also demonstrates "minimal WTC dust layers" responsible for high airborne asbestos

The 110 Liberty St. study showed that apartments with minimal dust layers resulted in the failure of air tests even after 2 or 3 aggressive professional abatements. Furthermore, none of the dust was ever over 1% at 110 Liberty St.

Another study commissioned by the Ground Zero Task Force of Elected Officials documented very high, hazardous levels of asbestos in air in an apartments that only had very thin, minimal layer of dust.[22] This apartment was 5 blocks north of Ground Zero on Warren St. The NYC DOH stated that its do-it-yourself cleanup guidelines did not even apply to addresses north of Warren St., because the WTC dust supposedly had not reached that far. A photograph of the dust layer is shown in the study. It is so thin that you can still see the grain of the wood on a table, and read what is written on a piece of paper.

Despite this minimal dust level, air concentrations of asbestos were still extremely high, higher than EPA ever reported in any of its outdoor air measurements. The air in the apartment had these highly hazardous levels even when the air was measured under passive conditions which is not allowed when performing the AHERA test. For the apartment with the heavier dust layer, the air levels of asbestos were 90 times the AHERA clearance level of 70 s/mm^2.

The following are press and other accounts of the findings of this study:

> 11/20/01
> Meanwhile, a group of elected officials released a privately conducted air quality study that found extremely high levels of asbestos in two buildings near Ground Zero in mid-September.
> . . .
> The group cited a study of dust and air samples taken Sept. 18, a week after the Trade Center attack, at a seven-story apartment building at 45 Warren St. four blocks north of Ground Zero and a 30-story apartment building at 250 South End Ave. in Battery

Park City, just southwest of Ground Zero.

One of the experts who conducted the study was John Kominsky, a chemical engineer based in Cincinnati. Kominsky said the levels of asbestos found in the two buildings far exceeded the maximum level the Environmental Protection Agency deems permissible in schools that have undergone asbestos remediation.

That standard is 70 "structures" fiber, bundle or fine material per square millimeter.

The levels found at 45 Warren St. ranged from 279 to 376 structures per square millimeter. At 250 South End Ave., the levels ranged from 6,277 to 10,620 structures per square millimeter.

Kominsky said those levels would cause "significant health risks" if there was long-term exposure. He advised that anyone cleaning up those buildings should know the "proper techniques" for handling asbestos.

. . .

[Safety Guidelines Set For WTC Site Workers Dems seeking cleanup czar, New York Daily News, 11/20/01, By GREG GITTRICH and FRANK LOMBARDI]

1/13/02

Civilian scientists and physicians hired by unions, tenant groups, contractors and New York political leaders found just the opposite. Taking hundreds of samples, many inside apartments, offices and condos, these experts used the newest electron microscope technology and fiber counting protocols. They found far more asbestos fibers than did government investigators. These private experts - all regularly used by the government as consultants - found levels in the dwellings that alarmed many assessing the health risk New Yorkers face.

"These eminent asbestos researchers brought state-of-the-art methods to lower Manhattan and the significance of what they found with the new technology is dramatically different than what EPA and New York State reported," said Cate Jenkins, a senior EPA chemist in the agency's hazardous waste division.

"For every asbestos fiber EPA detected, the new methods used by the outside experts found nine," Jenkins said. "This is too important a difference to be ignored if you really care about the health of the public."

Jenkins, a 22-year veteran of the EPA, talked about the asbestos levels that researchers Eric Chatfield and John Kominsky found in apartments and condos near the collapse that had not been cleaned or cleaned improperly.

. . .

[Asbestos Risks Near Ground Zero May Be Far Greater Than Government Reports, By Andrew Schneider, ST. LOUIS POST-DISPATCH, 1/13/02. Updated by the St. Louis Dispatch on its anniversary date, 1/13/03, under a new title, "World trade center attack asbestos health threat" and can be found at www.stltoday.com]

12/19/02

Walter Mugdan, Counsel for EPA's Region 2, stated that the NYC DOH Recommendations should be followed in situations with minimal, small amounts of WTC dust.[23] An apartment with just such minimal, small amount of WTC dusts was the subject of the Ground Zero Task Force study . . . A color photograph of a dark table is included in this study, showing what would be considered "small amounts" and "minimal" dusts by most people.[24]

. . .

[Excerpt from Table 2]	*[concentration of settled dust on surfaces]*	*[level of asbestos in air in units of both structures per milliliter and structures per square millimeter. Air measured under passive condition, no fans or leaf blower.]*
HIGH EXPOSURE BUILDING, 250 South End Ave. Heavy visible dust layer, could still read addresses on envelopes on table and see the lines on a yellow legal pad on the table. Windows had been blown out some places. Dust level from living room high boy side table, living room air level measured under passive conditions. [		
Passive conditions, found by testing	640,000 s/cm^2	2.56 s/mL [equivalent to 6277 s/mm^2] ***[this is 90 times the AHERA level of 70 s/mm^2]***
LOW EXPOSURE BUILDING, 45 Warren St., dust layer visible on dark table, grain of wood still visible. 5 blocks from Ground Zero, building faced north. Dust level from living room table, living room air level measured under passive conditions		
Passive conditions, found by testing	29,000 s/cm^2	0.12 s/mL [equivalent to 376 s/mm^2] ***[this is over 5 times the AHERA level of 70 s/mm^2]***

. . . *[Jenkins' 12/19/01 memo]*

EPA misrepresents findings of GZTF study of indoor air, claiming it showed "consistent" results with EPA tests of outdoor air

In testimony, EPA falsely claimed that results the study commissioned by the Ground Zero Elected Official Task Force (GZTF)[25] were "fundamentally consistent with EPA's findings." In fact, EPA had only measured asbestos in outdoor air, where it was diluted. EPA did not find levels exceeding 70 s/mm^2, the AHERA clearance level. However, the GZTF study measured air indoors and found the levels were over 5 to 90 times the 70 s/mm^2 AHERA level. No reasonable person could state that the findings of the GZTF were "fundamentally consistent" with the EPA findings. The claim by EPA that they were constitutes concealing the findings of the GZTF study and their implications from the public.

11/26/01

As you know, individual groups and organizations, including the Ground Zero Elected Official Task Force, have undertaken their own studies of environmental conditions in

> and around the World Trade Center site. Reports summarizing these studies, such as the October 12 report prepared for the Task Force, show results that are fundamentally consistent with EPA's findings. Furthermore, the recommendations offered to the public as a result of these independent studies are also consistent with those of EPA.
> . . .
> *[Testimony of Kathleen Callahan, Acting Deputy Regional Administrator U.S. Environmental Protection Agency, Before the New York State Assembly, 11/26/01]* [26]

Demolition of Deutsche Bank, other buildings – abatement not always possible

It is not always possible to remove asbestos with the techniques used by asbestos abatement firms. At the Libby, Montana Superfund site, at least one building had to be demolished and rebuilt because it asbestos could not be removed otherwise. Public School 90 in NYC has been boarded up and abandoned for years because of asbestos contamination, but not abated.[27]

The planned demolition of the Deutsche Bank building, a 44 story building near Ground Zero at 130 Liberty St. is yet another example of the impossibility in some cases to clean contaminants such as asbestos from buildings. The ineffectual do-it-yourself cleanup guidelines of the NYC DOH, as recommended by EPA, certainly would not work on this building. Even the rigorous procedures EPA used in the 110 Liberty St. study would not have worked. This is because they already tried even more rigorous procedures to get rid of the mold.

Mold is not the reason that the Deutsche Bank building is coming down. A large amount of effort was spent to remove the mold walls and ceilings were torn down, and carpets were replaced. These stringent measures to try to get rid of the mold are more rigorous than the procedures used during EPA's 110 Liberty St. study. The NYC DOH declared in March of 2003 year that the building was free of any mold. We would have to doubt the competence of the NYC DOH if we still believed that mold was a problem.

The 110 Liberty St. building is only about 300 feet from the Deutsche Bank building. It had its windows blown out by the blast, and thus may have accumulated a relatively larger amount of inside WTC dust than the 40 story Deutsche Bank skyscraper. The Deutsche Bank only had a 24 story gash on the front, but the windows remained intact on other sides of the building.

Structural integrity is also not the reason for the razing of the Deutsche Bank building. Even though a gash was made in the building by the falling towers, the building was determined to be structurally sound, according to press accounts as well as The WTC Report.[28]

But asbestos and other contaminants that could not be removed resulted in a decision to demolish the building. The building was built around 1971. No spray-on asbestos fireproofing was used in the building. This means that any asbestos would have come from the outside, namely WTC dust.

The news stories below explain:

6/21/03

The Deutsche Bank building, the last skyscraper still standing at the lip of Ground Zero, looks headed for demolition, nearly two years after the September 11, 2001 terrorist attacks, sources said.

. . .

A straightforward implosion of the structure has been ruled out, because of all the asbestos and contaminants that have made the building unusable.

. . .

[Last building at 'Ground Zero' to go, 6/21/03, South Africa Sunday Times, AFP, http://www.sundaytimes.co.za/zones/sundaytimes/newsst/newsst1056177743.asp]

6/20/03

The battered and disfigured Deutsche Bank building in Lower Manhattan, among the last remaining buildings damaged in the Sept. 11 terrorist attack whose fate has not been decided, has been deemed beyond repair and is expected to be taken down beginning next month, according to people involved in negotiations on its future.

. . .

The building must be disassembled more than torn down, covered in an airtight tarp to contain the asbestos and other contaminants that have made the building unusable. As a result, the cost of the work has been estimated at more than $100 million, according to people involved in planning the project. Insurance payments to Deutsche Bank are expected to cover most of the cost.

. . .

Although steel falling from the south tower of the trade center ripped a 24-story gash in its northern facade, the building remained structurally sound. Its sprinkler system was triggered, however, and the combination of standing water, contaminants from the trade center, sealed windows and little direct sunlight spawned a robust strain of mold throughout much of the building.

After an intense cleaning, the city health department declared the building free of mold earlier this year. The dismantling of the building will still require engineers to pay close attention to environmental hazards, accounting for most of the costs of taking the building down. Raising scaffolding around the building to support the tarp enclosing the project will cost more than $10 million, according to a real estate executive familiar with the project. The removal of asbestos and other contaminants is expected to cost more than $70 million, while taking apart the structure will run at least $25 million.

. . .

[Last Days for a Survivor of Sept. 11, 6/20/03, By EDWARD WYATT and CHARLES V. BAGLI, NY Times]

4/3/03

Deutsche Bank has cleared its building at 130 Liberty St. of mold, which some Downtowners feared posed a health hazard, the city's Health Department said last month.

Chris D'Andrea, a scientist at the agency, told Community Board 1 last month that in February Health Department officials and Deutsche Bank representatives toured several floors that had been damaged by mold. "The floors they took us to had obviously been remediated," he said. "Ceiling tiles had been removed, wallboards had been cut down and carpeting had been removed."

D'Andrea returned on March 5 to inspect every floor, and the only mold he found was in a refrigerator in a kitchenette. "I wouldn't think the building posed a health problem as far as mold is concerned," he said.

. . .

[Tribeca Tribune, Online News, 4/30/03, http://www.tribecatrib.com/newsapr03/deutsche_bank.htm]

5/8/02

The bank is concerned enough about the mold and asbestos contamination in nearby buildings that it has allowed few employees to retrieve items from the offices, sources said. Those who have gone into the tower say they have had to undergo safety training and don a protective suit and respirator. "You need permission from a senior level," said a bank official. "You have to go through all the safety steps because they believe it's not safe."

Deutsche Bank officials have been tight-lipped about the tower's fate.

. . .

[Mold May Topple Bldg: Dangerous Fungus Infesting Ground Zero Skyscraper, By Ralph R. Ortega and Greg Gittrich, 5/8/02, NY Daily News]

Progress of EPA's voluntary cleanup

Under EPA's voluntary cleanup program, where much less rigorous methods are used in comparison to the EPA study at 110 Liberty St., abatement is not going well.

On EPA's web site, aggregate air test results are posted at http://www.epa.gov/wtc/factsheets/clean_test_results.htm . For the week ending 6/19/03, EPA is claiming that 5.1% of apartments overall failed the air tests after EPA's cleaning. This includes those with overloaded filters, which means there were so many particulates on the test filter that the laboratory could not distinguish the asbestos fibers.

The claim that EPA only has about a 5% cleaning failure may represent the results after several abatement efforts in the same apartment. It certainly could not represent a success rate after only one try of EPA's abatement procedures. This is because the abatements under EPA's voluntary program usually were not coordinated whole building abatements like the 110 Liberty St. study, which means no abatement of common areas, HVAC systems, or exteriors. Also, personal belongings would have been present in these apartments abated by EPA, unlike the Liberty St.

study. Furthermore, the abatements done in these apartments did not use the rigorous methods used at 110 Liberty St. At 110 Liberty St., even before EPA got there, a professional abatement had been performed, and then the fire department came in again to clean up dusts prior to EPA's arrival..

At 110 Liberty St., where 7 out of 13 apartments only had minimal dust, and the dust was less than 1% asbestos, 30% of the apartments failed EPA's air tests after the 1st abatement.

The validity of the air testing data in EPA's voluntary cleanup program is highly suspect, since it appears to have a lower failure rate than EPA found during the 110 Liberty St. study, a much more rigorous abatement. The laboratory would not be at fault. Instead, it is such a simple matter to block the portals completely or partially of an air testing device so that air is not pulled through the test filter. Alternatively, the pumps can be set so that not much air is pulled through.

Stories of EPA cleanup at one building also cast doubt on EPA success rate

There has been a series of errors and possible misrepresentation of data at one EPA cleanup site, IPN plaza near the pier where debris was stored and transported before being carried by barge to the Staten Island landfill. After three failed abatement attempts, EPA reported that the filters were still overloaded in a common area. EPA's Ben Barry told residents that there would be no fourth abatement, that EPA had exercised due diligence, and that was that, sorry, folks. I was consulted at this point in time. The press got involved.

Then, amazingly, EPA claimed that they had made a mistake and were only looking at the old data. The air test actually hadn't failed after the third abatement. They had made a mistake, and were looking at the air test for the second abatement, not the third.

This is not credible because there was so much scrutiny and discussion about the overloaded filter after the third attempt at abatement. At same. EPA's Ben Barry was also telling residents not to worry about asbestos, because it would all be trapped by the new carpeting. See the following two press accounts:

> 5/6/03
> Lori Mogol and Richard Zimbler watched from their balcony at Independence Plaza North as ground zero was cleaned ahead of schedule. But almost a year after the last of the debris was hauled away, the couple's home has still has not been cleared of toxins that likely resulted from the collapse of the World Trade Center.
>
> In late February, elevated levels of asbestos were detected in the couple's apartment after it was cleaned and tested by Environmental Protection Agency contractors. In mid-March, the agency sent them a letter they found to be confusing and technical, informing them of the excess asbestos and advising, "You will be contacted by an E.P.A. representative who will discuss these results with you and help you to decide upon a

follow up course of action."

Six weeks later, Mogol and Zimbler said they had received no further communication from the E.P.A. Along with their psychic wounds from the Sept. 11, 2001 terror attack, the asbestos in their apartment serves as a constant reminder of the events of that day. "We haven't even gotten beyond the physical cleanup, because there are chemicals in here," Zimbler said. "So how can we go on to recovery?"

Zimbler has experienced congestion and other respiratory problems since Sept. 11, 2001, although Mogol has not. In addition to witnessing the events of the day, the couple has a close friend who lost her husband in the trade center attack.

Zimbler and Mogol are not alone in their frustration with the E.P.A.'s voluntary asbestos testing and cleanup program, a response to the World Trade Center disaster that began last August in residences south of Canal, Pike, and Allen Sts. Some of their neighbors, and the building management at I.P.N., have also found themselves waiting for months for answers about the safety of the three-building complex in Tribeca, especially 310 Greenwich St., the southern-most of the three, where Zimbler and Mogol live in an apartment that faces the trade center site.

E.P.A. tests taken after the couple's apartment was cleaned by ATC Associates, one of the agency's contractors, revealed asbestos levels in their dining room of .0021 fibers per cubic centimeter, more than double the E.P.A.'s risk-based clearance level of .0009 fibers per cubic centimeter. In keeping with the program's protocol for asbestos, no tests were taken prior to the cleanup, so it cannot be determined what the asbestos levels might have been before E.P.A. contractors spent a day vacuuming and wiping the apartment.

. . .

Mary Mears, an E.P.A. spokesperson, said that the agency's coordinator for I.P.N. tried calling Zimbler and Mogol three or four times to follow up on the letter but was unable to reach them. The couple believes it is unlikely that they missed the E.P.A. calls, as Mogol develops Web sites from a home office and an answering machine takes messages when she leaves the apartment during business hours.

. . .

Diane Lapson, the head of the environmental committee, estimated that about half of I.P.N. tenants initially registered for the E.P.A. program, but said she did not know how many decided to continue with the process.

A tenant of 310 Greenwich St. interviewed outside the building said that he, too, received a letter from the E.P.A. after his apartment was cleaned, informing him that asbestos levels there exceeded the agency's benchmark. The tenant, a 39-year-old who works for the city and declined to give his name, said he got the letter in early March but never received any follow-up call from the E.P.A. that explained the results or suggested further action.

. . .

When a residence does not pass the E.P.A. risk-based clearance level, then it is re-cleaned, Mears said. The four cleaning contractors the E.P.A. has engaged for its Lower Manhattan program are also responsible for scheduling appointments, Mears said.

. . .

The E.P.A. developed the risk-based asbestos standard of .0009 fibers per cubic centimeter specifically for the agency's Lower Manhattan cleaning and testing program, Mears said. A person exposed to that level of asbestos continuously for 30 years has a

one in 10,000 risk of developing asbestos-related cancer, according to E.P.A. toxicologist Dr. Mark Maddaloni. Since the levels found in Mogol and Zimbler's apartment were about double those of the standard, their asbestos-related cancer risk would rise to two in 10,000, Maddaloni said.

More than any immediate health concerns, Zimbler and Mogol say they are upset by the way the E.P.A. has treated them.

"This is what maddens me, just the absolute lack of accountability," Zimbler said. "To me, one of the biggest problems of the E.P.A. is they're still thinking of themselves as an enforcer. They haven't seemed to make the leap like every other federal agency that they're first responders." Others say the E.P.A. is doing the best that it can with a problem of unprecedented scope and a program that falls outside its usual duties.

"I think what the E.P.A. is doing is what they're supposed to do," said Steven Cohen, the director of a graduate program in environmental science and policy at the Earth Institute of Columbia University. "The question on follow through is whether the people who received the letter did follow through. It doesn't seem like it's that complicated."

. . .

The process did not go as smoothly for Zimbler and Mogol. A set of technical charts accompanied the E.P.A. cover letter that they received informing them of their asbestos results. Their dining room asbestos level of .0021 fibers per cubic center meter was not mentioned in the cover letter, which simply said that their apartment's asbestos levels exceed the E.P.A. standard, and instead the data was noted on charts that Maddaloni said were "admittedly not that readable."

Maddaloni and other experts have helped residents who call the agency decipher their test results. The E.P.A.'s letter to Zimbler and Mogol included a phone number to call with any questions. But some say that the charts should be more clearly presented, eliminating the need for further assistance.

"The average tenant has no idea what these mean they see numbers all ov er the place," said Deborah Dolan, the property manager at I.P.N, who said that through experience, she has become more practiced at reading lab results. Dolan said she has been trying since last fall to learn the results of the E.P.A.'s testing and cleaning of the common areas at I.P.N. "The whole thing is just ridiculous," Dolan said. "Everything is a secret for some reason."

Dolan said that I.P.N. underwent a series of asbestos tests in the 1980s that came out clear, increasing the likelihood that any asbestos found in I.P.N. could have come from the trade center collapse. The buildings of I.P.N. were built right around the time when New York City stopped using asbestos in construction, which was in 1973, according to a spokesperson for the city's Department of Environmental Protection.

The E.P.A. has not yet released the I.P.N. common area test results because contractors are still re-cleaning parts of the complex, said Ben Barry, a community involvement coordinator for the E.P.A. Barry said he could not confirm whether the re-cleaning was due to elevated asbestos levels or filter problems that prevented an initial reading, but he said that mechanical difficulty was generally more often the cause for a re-cleaning.

"We usually just try to give the final results because a progress report wouldn't do a good job of telling residents the status of a building," Barry said. Barry declined to give an

estimate of when the agency would be done testing and re-cleaning at I.P.N., but said that once the common area test results were compiled, a copy would be sent to the I.P.N. tenants' association.

Some residents do not want to wait any longer, saying that even bad news would be better than uncertainty. "We have a lot of fears, because we're not hearing the truth of the situation," Lapson said.

Lapson and others worry about the possibility of re-contaminating apartments if common areas found to have elevated asbestos are re-cleaned after apartments have already been scoured.

Barry said cross-contamination risks were minimal since the asbestos levels are low to begin with and the complex's new carpeting would trap any harmful fibers.

Mogol and Zimbler said they sometimes feel the city has forgotten those who are still hurting from the terror attacks of Sept 11. A clean, asbestos-free apartment would be a good place to begin the healing process, they said, but it won't bring back those who were lost. "All this cleanup is a metaphor for move on and forget," Mogol said. "Then everything will be all right. But it isn't."

. . .

[Asbestos found in I.P.N., after E.P.A. cleanup, 5/6-12/03, Elizabeth O'Brien, Downtown Express,, http://www.downtownexpress.com/DE_WEB_02/asbestosfound.html]

5/20/26

The stairwells of 310 Greenwich St. received a clean bill of health from the Environmental Protection Agency last week, the outcome of the third round of tests they underwent as part of the agency's Lower Manhattan cleanup. The first two times the stairwells were cleaned and tested for asbestos beginning in January, 2003, overloaded filters prevented scientists from analyzing some of the test results, according to E.P.A spokesperson Mary Mears.

. . .

News that the stairwells cleared surprised the property manager at Independence Plaza North, the three-building Tribeca complex that includes 310 Greenwich St. Deborah Dolan, the manager, said an E.P.A. worker told her last Tuesday that the agency couldn't get a reading for some of the samples on the third try, either.

On Friday, Mears confirmed that there had been a mistake: agency workers had looked at the results of the second test when they told Dolan that there was an overloaded filter on the third try. "Unfortunately, we pulled out the old data," Mears said.

. . .

More troubling than last week's episode, Silverman said, was that the common area test results are only surfacing now, more than five months after the E.P.A. began cleaning at I.P.N. Tenants said that the agency assured them before the program began that common areas would be cleared before they started on the apartments.

. . .

Responding to residents' fears of recontamination, Ben Barry, an E.P.A. community involvement coordinator, told Downtown Express two weeks ago that asbestos levels at I.P.N. were likely very low to begin with, but if there were any asbestos fibers left after

the cleaning, they would be trapped by the new carpeting put down by the management of the three-building Tribeca complex.

But Barry's attempt to reassure the public was disputed by other E.P.A. scientists as not being based on established scientific evidence.

"There are no scientific studies that show there's any kind of encapsulation process," said Dr. Cate Jenkins, a veteran E.P.A. scientist who works in the hazardous waste identification division of the agency's Washington, D.C. headquarters, using a term that refers to the entrapment of asbestos fibers in materials such as carpeting.

Dr. Mark Maddaloni, a New York-based E.P.A. toxicologist, also noted that the relationship between carpeting and asbestos requires further study, saying of the potential risk, "That's poorly understood."

Prof. Arthur Langer, an environmental scientist at Brooklyn College, said that while Barry's remarks might have been correct that the risk to I.P.N. tenants was small, the community outreach coordinator should have been more responsive. "This person from the E.P.A., I'm sure he's trying his best, but these people have been traumatized, you need to listen and address their concerns," Langer said. "These folks were in a war zone, you don't tell them it's all right, it's all in the carpet."

. . .

[E.P.A. says I.P.N. stairwells are safe, 5/20-26/03, By Elizabeth O'Brien, Downtown Express, http://www.downtownexpress.com/de_04/epasays.html]

H: "FIRST RESPONDERS FOR PUBLIC WARNING" – EPA IG QUESTIONNAIRE MUST ASK WHO MOTIVATED PUBLIC TO TAKE PRECAUTIONS (OBVIOUSLY NOT EPA)

"To what extent were EPA and government communications regarding air quality and associated health risks: (a) received by the public; (b) understood by the public; and (c) effective in getting people to take the desired actions to reduce their potential health risks?

. . .

"Did people receive enough information about air quality? Did people return to their homes without adequate information regarding health risks* . . . Plan to address these issues in survey of 5,000 NYC residents. Survey poses 43 questions about communications received by the public and actions taken by the public. Anecdotal evidence and first person interview (researchers, others who observed practices first hand) indicate (a) website useless to many until too late – no electricity, no phone, no computer, etc. (b) some missed subtleties of EPA's intended message (outdoor air only; long term only; outside ground zero only), and (c) may not have been effective in consistently getting public to take desired precautions before returning."** ***[1/27/03 EPA IG report]

The EPA IG report itself is creating a large misconception by the following statement:

> . . . may not have been effective in consistently getting public to take desired precaution before returning. . . . *[EPA IG 1/27/03]*

In light of the written record, there is no evidence that EPA ever desired that citizens take any reasonable precautions. There is no evidence that anything EPA said or did was the cause of citizens taking precautions. If there were inconsistencies in the public taking precautions, then the fact that some did was due to warnings from others outside of EPA, certainly not from EPA. The only subtleties that may have been missed were EPA's willful concealments of hazards and necessary precautions.

EPA IG after-the-fact questionnaire may be an attempt to obfuscate record

For the EPA Office of the Inspector General (EPA IG) to announce that it will use a survey to determine what type of information the public had on hazards during those critical weeks and months after the disaster is highly questionable. When the public did get information on how to

protect themselves, it came from experts who took the risk to speak out against the EPA message of "no hazards." The EPA IG may well be using the questionnaire to confuse the issue at this late date, by the mechanism of asking if people took certain types of precautions, and if they did, attributing the precautionary actions to EPA's warnings and information. In other words, the EPA IG may be intending to design the questionnaire as a way to prove that the public protected itself because of actions taken by EPA.

A questionnaire almost two years after the event, when the written record is already complete on what EPA and other authorities told the public, is suspect for that reason alone.

Questionnaire needs to ask who warned the public – otherwise it is invalid

The EPA IG stated that its "[s]urvey poses 43 questions about . . . actions taken by the public." This will result in highly biased results unless the IG also asks who specifically warned the public about taking each particular action.

This is the way it could work: The questionnaire could ask open-ended questions like whether citizens had their apartments professionally cleaned, whether they discarded soft items like carpets and upholstered furniture, or whether citizens relocated until their residences/businesses were professionally cleaned. Then, all the EPA IG would have to do is interpret the responses this way:

> More than 50% of citizens had their spaces professionally cleaned and discarded soft items, and relocated until this cleaning was completed. This shows that EPA was effective in communicating hazards and the precautions that were required.

That is why the questionnaire needs to ask specifically who warned the public to take these actions. EPA never advised citizens to have their spaces professionally cleaned EPA only advised using the NYC Department of Health do-it-yourself guidelines, which stated that even dust masks were unnecessary, much less a HEPA respirator. (See Section E on EPA's advice on cleaning residences and businesses.)

As another example, the IG questionnaire could ask an open-ended question like this: "What information did you receive from the press on the hazards." People filling out the questionnaire would say that the press warned them. The IG could then put their own spin on this, saying that EPA must have been effective in communicating with the public, because the public said that they were warned by EPA through the press.

That is why the IG questionnaire needs to ask specifically who warned the public about hazards or the necessary precautions, and whether it was EPA or some other individuals or organizations that motivated the public to take precautions.

Documented mistrust shows public unlikely to have relied on EPA for advice

The public quickly learned to distrust the EPA and NYC misinformation about hazards from Ground Zero. They took the advise of others.

The following are press stories documenting citizen distrust of EPA. EPA spokesperson Bonnie Bellow is quoted as saying that she learned first hand that EPA lacked credibility about its statements after the WTC collapse. There also is a poll, where 70% of New Yorkers said that they did not trust EPA.

> 11/21/01
> Government agencies monitoring the air quality near Ground Zero have lost much of their credibility with the public, Environmental Protection Agency officials and public health experts said yesterday.
> . . .
> Whether it's a general post-Watergate mistrust of government agencies or the belief that the city is engaged in spin control to keep businesses alive, the argument that the air is safe is not registering with the public particularly those who have felt irritation from smoke and dust near Ground Zero, panelists said.
> . . .
> EPA spokeswoman Bonnie Bellow said she learned firsthand what type of credibility problem the government has with the chilly reception she received at her daughter's alma mater, Stuyvesant High School, near the World Trade Center site.
>
> Bellow said she expected she would have the inside track toward easing fears about air quality because only last year she was a Stuyvesant parent. "That was completely overridden by the fact that I worked for the government," she said.
>
> "People still have doubts about air quality," said John Cahill, senior policy adviser to Gov. Pataki. He noted that local, state and federal test results have shown no immediate danger to people downtown.
>
> One way to improve the credibility of public health agencies is to have their experts admit more readily that they don't know what the long-term health implications are, doctors said. That's largely because there have been no long-term studies to use for comparison.
>
> "Risk communication is more than spin," said Dr. Phil Landrigan, chairman of community medicine at Mount Sinai Medical Center. "If you think it's spin, then you've lost the battle already."
>
> Under Pressure to Spin?
>
> Panelists said there is a perception in the community that city, state and federal governments are pressuring their agencies to put a good spin on information in the effort to rebuild the area . . .
> . . .
> *[Public Distrusts Gov't Air Tests, By JOE WILLIAMS, NY Daily News, 11/21/01]*

3/10/02

Six months after terrorists toppled the twin towers, killing 2,838 people and plunging the nation into war, 68% of New Yorkers feel the city is as safe or safer than any other place in America. But 56% also admit that at some point after Sept. 11 they were racked by depression, sleeplessness, anxiety or nightmares. Fully 59% of all New Yorkers including 67% of those living or working downtown say they suffered f inancial setbacks after the terror attacks.

And 70% said they do not believe the Environmental Protection Agency or other government agencies' reports that the air quality around Ground Zero is safe.

These were among the most striking findings of an exclusive Daily News/NY1 poll of 505 adults in New York City, conducted March 5 by Blum and Weprin Associates. The margin of error was plus or minus 4.5 percentage points . . .

. . .

[N.Y.'ers Say City Safe as Anywhere, Poll finds many took financial hit, By BRIAN KATES, NY Daily News, 3/10/02]

3/10/02

Among the findings of a NY1 and Daily News poll on issues related to the September 11 terrorist attacks, the vast majority of New Yorkers do not believe the air is safe in and around the World Trade Center site. A whopping 70 percent of those surveyed said they do not believe the Environmental Protection Agency and other government agencies that say the air quality near the World Trade Center site is safe. Twenty-three percent believe the air is safe, and 8 percent weren't sure.

"This is the question where we see New Yorkers of all types," said pollster Julie Weprin of Blum and Weprin Associates," in clear agreement where they do not believe reports by the EPA and other government agencies that the air down near ground zero is safe to breathe."

. . .

[New Yorkers Don't Believe Downtown Air Is Safe, Poll Finds, New York 1 (TV), 3/10/02]

1/13/02

"We didn't see ourselves as the primary source for information on what the health implications were. We're not a health agency," she said, adding that these are national issues that EPA headquarters should be addressing.

But headquarters has repeatedly declined to discuss these policy issues, even though before Sept. 11, the EPA was in turmoil over how to handle several asbestos problems throughout the nation.

Granger who has studied the importance of risk communication, said the ball was dropped. *[Hugh Granger, HP Environmental, who took samples of WTC asbestos withing weeks of 9// see Section H on the true "first responders for public information"]*

"We are talking about the very lives of these people and those they love," he said. "Because of the misleading or completely inaccurate government information and guidance, people don't know where to turn or whom to trust."

. . .

[NY officials underestimate danger, Reporter Andrew Schneider: St. Louis Post-Dispatch on Sunday, January 13, 2002. Updated by the St. Louis Dispatch on its anniversary date, 1/13/03, under a new title, "World trade center attack asbestos health threat" and can be found at www.stltoday.com]

1/18/02

"EPA is greatly relieved to learn that there appears to be no significant levels of asbestos in the air in New York City," said Administrator Christie Whitman in a Sept. 13 message repeated many times.

But now, amid growing scientific evidence of high asbestos levels in homes and other potentially serious air quality problems related to the attacks, many New Yorkers believe the EPA misled them and was perhaps too eager to promote the return to business as usual in lower Manhattan.

. . .

While there is no hard scientific evidence that New Yorkers are in danger from contamination, many observers say federal officials failed to properly communicate the level of medical risk to the city.

"All along, the EPA and other departments have been assuring people in New York City that things were fine, but things were not fine," said Dr. Stephen Levin, medical director of Mount Sinai Hospital's Center for Occupational and Environmental Medicine. "There was a great desire to resume business as usual here, and I do mean business, because there's a great push to commercially redevelop the [World Trade Center] site."

. . .

[Some See N.Y. Air as a Hidden Menace: Many believe EPA cited safety too quickly. Pollutants indoors a key worry. By Josh Getlin, LOS ANGELES TIMES, 1/18/02]

9/9/02

Many residents have been mistrustful of health officials because they feel they didn't warn them enough of potential hazards early on or take necessary steps to protect them from dust mixed with hazardous materials such as asbestos and heavy metals.

. . .

[Dusting off Manhattan: A year after 9/11, worries about toxic dust plague residents, 9/9/02, By Francesca Lyman MSNBC, http://www.msnbc.com/news/803400.asp]

The "First Responders for Public Warning" during September to October, 2001

The following are those who risked countering EPA and NYC claims of safety during September and October after the disaster, the critical time when citizens were returning to their homes and

businesses, cleaning up the dust with no protection whatsoever, not even drug store dust masks, because of the unsafe advice from EPA and NYC officials. One week after the disaster, the New York Stock exchange reopened. By October 5, it was reported that 12,000 of the 20,000 displaced residents were back in their homes in lower Manhattan.[29] The other residents below Canal St., about 340,000 people,[30] had never been formally "displaced" and had typically remained in their residences.

Those who spoke out included scientists, physicians, industrial hygienists, environmental activists, elected officials and journalists. Thus, the public was slowly being made aware of problems, but in opposition to the false information from the EPA and NYC. The public had no access to the experts except through the press. They did not need scientists or a medical doctors to sit in an ivory tower, knowing the answers but not speaking out.

If these "first responders for public warning" had not found a public voice, citizens would have believed, and still believe to this very day EPA's original claims that there were no hazards. They would have returned to their homes and businesses, cleaning up the toxic fallout themselves, using the NYC DOH guidelines and probably less, as instructed to do so by EPA.

This review is limited to those who responded during those critical two months following the disaster. Others continued the investigation, challenging the official statements of EPA and NYC authorities. An excellent account of the struggle by journalists to cover this story may be found in the January/February 2003 issue of the American Journalism Review, posted online.[31]

Dr. Philip Landrigan, Mount Sinai School of Medicine

Dr. Philip J. Landrigan, Chairman of the Department of Community and Preventive Medicine at the Mount Sinai School of Medicine in New York City, was the first to publically oppose the claims of both EPA and NYC officials. Dr. Landrigan is a renowned researcher on the human health effects of asbestos.

On 9/13/01, the following story appeared in the NY Daily News. The Daily News also was the first newspaper to publish any statements opposing the official line by EPA and NYC officials. In this story, Dr. Landrigan's statements were juxtaposed with those of Mayor Giuliani and Dr. Neal Cohen, the NYC Health Commissioner. Note that "another environmental expert" is quoted in the story as agreeing with Dr. Landrigan, but that this person would not give his/her name, probably out of fear of retaliation.

> 9/13/01
> A prominent expert on asbestos warned yesterday that prolonged exposure to the rubble and dust of the collapsed World Trade Center towers could pose a "real" health hazard.
>
> Dr. Philip Landrigan of Mount Sinai Medical Center said he was concerned about the

workers clearing away the debris and rubble of what used to be the city's tallest landmark. He said prolonged exposure over weeks and months, without masks equipped with respirators, would increase the risk of lung cancer and a deadly form of cancer of the lung linings called malignant mesothelioma.

"You won't see any immediate problems," he said. "It will take 25 to 30 years to develop."

Mayor Giuliani and Dr. Neal Cohen, the city's health commissioner, said yesterday the air quality is being monitored, but no cause for concern has been detected. "The air is safe as far as we can tell, with respect to chemical and biological agents," Giuliani said.

Cohen added that city, state and federal environmental agencies are "looking at air asbestos" and that "at this point, we don't have any level of concern."

Landrigan, chairman of Mount Sinai's department of community and preventive medicine, said asbestos was used in the early 1970s in building some of the lower floors of the World Trade Center. It was mixed with water and cement into a slurry that was sprayed onto steel beams for fireproofing, he said. Controversy over asbestos stopped it from being used on higher floors, he said.

Another environmental expert, who asked not to be identified, agreed with Landrigan and said a substantial amount of asbestos was probably released by the collapse of the towers.

. . .

[SITE DUST CALLED HARMFUL, New York Daily News, 9/13/01, FRANK LOMBARDI]

Dr. Landrigan wrote an editorial on the consequences of the WTC collapse which appeared in the November 2001 issue of Environmental Health Perspectives, a publication of the National Institute of Environmental Health Sciences, calling for a nationally registry of exposed persons, and cautioning about the hazards of exposure despite the fact that OSHA and EPA air testing was showing low levels of asbestos:

11/01

Air samples obtained by the U.S. Environmental Protection Agency (U.S. EPA) and the Occupational Safety and Health Administration (OSHA) in the weeks since the attacks have shown that 8-hr time-weighted average (TWA) levels of airborne asbestos fibers are generally below OSHA standards (2). However, bulk samples of dust at the site show concentrations of asbestos ranging as high as 20%. This material is unevenly distributed at the site, but the potential for exposure is constant. Whenever workers pick up a steel beam or overturn a piece of rubble, the threat exists that a puff of asbestos can be thrown into the air and then inhaled. The long-term health risks of those exposures include lung cancer and malignant mesothelioma.

. . .

[C]oncern arises from the fact that many of those at risk of exposure are children. Several factors have the effect of increasing children's potential risk (3). Children live closer to the ground than adults and thus are more likely to inhale any materials stirred up from dust. Children breathe more air per kilogram of body weight per day. Also, children have more years of future life in which to develop mesothelioma or other delayed diseases that may result from exposures to asbestos or to other toxic materials.

> Almost no data exist on the possible long-term consequences of low-level asbestos exposure in early childhood. Cases of mesothelioma have, however, been reported in the grown children of asbestos workers (4), among nonworking women in the asbestos-mining townships of Quebec (5), and among long-term residents of a community near an asbestos plant in Italy (6). The need exists therefore to take aggressive steps to minimize pediatric exposure and also to create a registry of children of all ages who have been potentially exposed to dust.
> . . .
> Children are also at risk of exposure to toxic products of combustion that may have been generated during the explosions and fires. These materials include benzene, dioxins, furans, and polycyclic aromatic hydrocarbons. It may be advisable to obtain samples of venous blood from the children deemed to have been at highest exposure and then to analyze those samples for whichever toxic products of combustion are identified in environmental samples . . . Toxicity in utero is another possible dimension of the disaster.
> . . .
> *[Landrigan, P. J. (Nov. 2001) EHP 109, A514]*

In another press article in Newsweek on 10/5/01, Dr. Landrigan is quoted about the concern for the ultra-small asbestos particles found in WTC fallout. Dr. Landrigan is quoted in many publications during this critical time period.

> 10/5/01
> THE STUDY, BY THE Virginia firm HP Environmental . . . "This stuff was just crushed, just pulverized," says lead author Hugh Granger. "As it turns out, when we now measure and look for these very small fibers in the air and buildings, we find them, and we find them in uniquely elevated concentrations."
>
> "I find this very troublesome," says Dr. Philip Landrigan, director of environmental and occupational medicine at Mount Sinai School of Medicine in Manhattan and a leading expert on asbestos toxicity. "The smaller the particle, the more easily it can be aerosolized. And the easier job that it has penetrating right down into the very depths of the lungs."
> . . .
> The health implications of these findings are sure to be disputed. It is generally accepted that short-term exposure is not enough to cause the worst asbestos-related diseases, including asbestosis (chronic lung scarring), lung cancer, or mesothelioma, a rare cancer of the lung lining. In addition, experts say, it is the size and shape of asbestos fibers not any chemi cal compound found in them that causes disease. Their long, pine-needle shape allows them to lodge in lung pockets, causing scarring that eventually destroys the tissue. The crushed fibers Granger and his team found have this same needle-shape.
>
> But there is some dispute about whether the smaller fibers are more or less dangerous. A study of workers in South Carolina who were exposed to broken and fragmented asbestos fibers, perhaps like those at the World Trade Center, showed that "gram for gram, the risk for cancer was many times greater than any other asbestos exposure circumstance ever seen," says Landrigan. But other experts contend just the opposite, what researchers call "the Stanton hypothesis," which posits that shorter fibers are less irritating and more easily coughed out of lungs, says Max Costa, chairman of

> environmental medicine at New York University School of Medicine. . . .
> . . .
> *[Is Ground Zero Safe? New study suggests more asbestos at disaster site than previously revealed, 10/5/01, By David France, NEWSWEEK , http://www.msnbc.com/news/638853.asp]*

Dr. Landrigan continues to research the health effects on the community from the WTC disaster and communicate with the public on the hazards.

Monona Rossol, ACTS, industrial hygienist

On September 17, 2001, Monona Rossol appeared on WNYC, Leonard Lopate's morning program in an interview followed by taking calls from listeners about asbestos in WTC dust inside buildings. Rossol is an industrial hygienist, and President of Arts, Crafts, and Theater Safety, a few blocks north of Canal St. in NYC.[32] She then appeared on MSNBC advising on the proper selection and use of respirators during the WTC cleanup and recovery operation.

She assisted the NY Environmental Law and Justice Project (NYELJP) in testing dust samples for asbestos and other toxic materials on behalf of the Patrolman's Benevolent Association, and found the results contradicted EPA and NYC official claims of no asbestos contamination east of Broadway.

She prepared a press release, which was then co-signed by the NYELJP, urging residents not to clean up apartments with no respiratory protection until they tested and were certain there was no asbestos problem:

> 9/22/01
> DOWNWIND FROM DISASTER
> . . .
> Concern for the health of all those engaged in rescue and security operations, as well as those who live and work in lower Manhattan, has prompted the NYELJP and ACTS to conduct their own sampling of dust in and around the World Trade Center Disaster site.
>
> The brave workers on the WTC pile have expressed concern about the dangers of breathing dust and smoke. Workers are not currently provided enough information to make an informed decision about the health risks of the dust and smoke.
> . . .
> Although people living and working in the New York City area breathe less dust and smoke than the workers at the site, the public faces similar hazards. In addition, the public includes individuals who are more vulnerable to the smoke, such as heart patients, asthmatics, and children. We sent our dust samples taken from the WTC site area to ATC Associates of New York for independent analysis. The first four of our samples (Batch No.2962 analysis date 9/19/01) indicate that the hazards posed by the dust are significant. We urge the Environmental Protection Agency and Federal, State and local health agencies to release their data on the following substances.

FIBERGLASS. The most distressing finding is that three of the four samples contain fiberglass at levels between 10 and 15%.
. . .
ASBESTOS. Analyses of our dust samples showed that one in four samples tested contained 2.1% asbestos, which is more than double the 1% level at which a material is legally designated as hazardous, and is subject to special abatement and removal procedures. These results were consistent with those reported by EPA, with reported levels as high as 3.3% asbestos in some samples.

DIOXINS and PCBs. The fires at the disaster site are consuming a mixture of combustibles. Wood, paper, and every conceivable type of plastic from computers, vinyl-coated wiring and cable, urethane foam upholstery, vinyl plastic floor tile, and synthetic fiber carpets, are burning. PCB-containing oils from old fluorescent light ballasts may also be burning. It is well-known that fires involving such materials are sources of highly toxic combustion by-products- including dioxins, PCBs, furans, and other highly toxic and cancer-causing substances.

Even backyard refuse burning is banned in many places because the fires were shown to be a major source of environmental dioxins and other toxins.

EPA press releases imply that the smoke from this huge fire does not contain these toxic chemicals. Clearly, we are not getting complete information.
. . .
Perhaps indifferently and misleadingly, the New York City Dept. of Health has issued an advisory which states ". . .the general public's risk for any short or long-term adverse health affects are very low, and no significant health risks [are posed] to occupants in the affected area."
. . .
[NYELJP and ACTS joint press release, 9/22/01]

Her October and November, 2001 newsletters, ACTS Facts, advised that testing be done before any apartment cleaning, opposing the advice from the EPA and the NYC Department of Health.

<u>10/01</u>
I am shocked and angered by the advice given by the US Environmental Protection Agency (EPA, the Occupational Safety and Health Administration (OSHA), the New York State and [city departments] **. . .**
. . .
The tests performed by federal, state, and city agencies on the dusts lying on the ground and other surfaces are incomplete and thus cannot be used to determine the hazards to anyone involved in cleaning up these dusts. The primary substance tested by these agencies was asbestos. But there are other important contaminants, such as fiberglass, fine particulates **. . .** PCB's and dioxins.

[T]he agencies reported levels **. . .** as high as 4.49% asbestos **. . .** There were over 30 locations in lower Manhattan where concentrations were 1% or higher, including at locations five to seven blocks away from Ground Zero.
. . .
The agency's tests did not find hazardous airborne asbestos in street air **. . .** But these air monitoring results are misleading because they do not indicate what the air levels are

> inside buildings, schools, and homes in the area. The dust in outdoor air samples is diluted with wind from non-contaminated areas. Indoors, the dust is contained. Disturbing indoor dust during cleaning and other activities can result in higher levels.
> . . .
> The New York [City] Department of Health's website . . . provides advice that is typical of the major agencies. The NYC DOH says:
> . . .
> .Based on the asbestos test results received thus far, there are no significant health risks to occupants in the affected area or to the general public.
> . . .
> This statement is false. As I stated above: there were over 30 locations in lower Manhattan where asbestos levels were 1% or above, including at locations 5 to 7 blocks away from Ground Zero.
> . . .
> *[Officials Give Bad Guidance: Fail to Fully Test Dust in Trade Center Disaster, 10/1/01, ACTS FACTS, Monona Rossol, www.caseweb.com/ACTS]*

Rossol has continued to work, write, educate, and speak on WTC environmental issues. She lobbied Congress for a uniform cleanup, reviewed and commented on EPA draft documents, participated in negotiations and meetings with EPA on the cleanup, etc.

NY Environmental Law and Justice Project

The New York Environmental Law and Justice Project's (NYELJP) Joel Kupferman, Esq. worked with a wide range of emergency workers, police officers, fire fighters, union representatives, office workers and residents in the early days after 9/11. He, along with Rossol from ACTS, were among the first to independently test WTC dust.

> 9/28/01
> On Sept. 19, eight days after the downtown disaster, Joel Kupferman, director of the project, took 10 dust and debris samples from various locations in and around the ravaged area and sent them to two laboratories to be analyzed. One of the labs, ATC Associates of New York, has been used often by the Board of Education to test for asbestos in city schools. The other was Virginia based Environmental and Toxicology International.
>
> The tests showed that in four of the 10 samples, asbestos fibers comprised 2% to 5% of the lab specimens. . . . The amount of fiberglass in the samples was even greater than the asbestos s ome as high as 80% of the debris collected. Although not as dangerous as asbestos, fiberglass has been classified as a "possible carcinogen" by the International Agency for Research in Cancer. It also can trigger severe itching and rashes.
> . . .
> *[NY Daily News, 9/28/01, Health Hazards in air worry trace center workers. by Juan Gonzales]*

The NYELJP was one of the first to set up a comprehensive web site to inform citizens of the hazards of WTC fallout, posting not only their own data, but also the first full set of data released by EPA and NYC officials, obtained by the NYELJP through Freedom of Information Act Requests. This site may be found at www.NYenviroLAW.org .

NYELJP also was the first to test and find WTC contamination north of Canal Street. They also were the first to test WTC-contaminated carpet for asbestos using EPA's ultrasonification extraction method, also finding WTC dust in a building north of where EPA claimed there was contamination, finding high levels.

> 5/2/02
> A seven-story co-op building half a mile north of Ground Zero was recently found to be contaminated with high levels of asbestos.
>
> The building, at 150 Franklin St. in Tribeca, has housed a family-run child care center for years, and neither the child care center nor other tenants in the building evacuated their homes following the Sept. 11 attack on the World Trade Center.
>
> Like many people who live downtown, the building's tenants simply cleaned up the dust in their apartments and tried to return to normal. Not until mid-April sev en months after the collapse of the twin towers did the buildi ng's co-op board discover the high asbestos levels.
> . . .
> Stratton, whose wife operates the Treehouse toddler center out of the couple's apartment, insisted that "the children have not been exposed to anything," because no asbestos was found inside the toddler center. The building's elevator, like many in the former warehouse buildings that dot Tribeca, has an iron gate instead of a solid door, and its shaft has windows that face the street. Since several of the shaft's windows were broken on Sept. 11, dust from the trade center collapse may have easily penetrated the elevator area, Stratton conceded.
>
> At the time, according to Stratton, the co-op board believed the assurances from EPA and city officials that air quality downtown was safe, so it did not conduct extensive testing within the building. One of the co-op tenants, however, said she was worried about environmental hazards.
> . . .
> The one tenant was worried enough that by mid-April she asked Joel Kupferman of the New York Environmental Law and Justice Project to come to 150 Franklin and collect dust samples. Kupferman sent three samples to a laboratory. The lab results showed levels of 1.2%, 1.4% and 1.8% asbestos *[by using TEM electron microscopy]*. He immediately notified the EPA and the city's Department of Environmental Protection, and those agencies analyzed new samples on April 18.
>
> The DEP, using a crude analytical method called polarized light microscopy, detected no asbestos. But EPA scientists, using a more sophisticated method called transmission electron microscopy, found even higher levels, from 2% to 5% asbestos. "We recommended that it be professionally cleaned," said EPA spokesperson Mary Mears.
> . . . *[Asbestos Fallout Is Found In Co-op Near WTC Site, Juan Gonzales, 5/2/02, NY Daily News]*

The NYELJP has continued its strong advocacy for residents, firefighters, police officers, and the rights to a cleanup for citizens beyond EPA's arbitrary boundary of Canal St. Other environmental groups, particularly the major ones, were remarkably silent in the months following the disaster.

> 8/25/02
> Firefighters are rushing to emergencies around the city in trucks still carrying remnants of toxic World Trade Center dust and debris nearly a year after the Sept. 11 attacks, The Post has learned. Of the 122 firetrucks involved in rescue and recovery efforts at Ground Zero, 93 have yet to be totally cleared of asbestos, Fiberglass, lead and other contaminants, FDNY officials have confirmed and lab reports show. But those trucks went back into use months ago. Working firefighters continue to find debris fragments and spoonfuls of dust behind seat cushions, in hose compartments and in air conditioning units of their rigs - some of it potentially toxic.
>
> Debris scooped from three professionally cleaned rigs was tested by a watchdog group, the New York Environmental Law and Justice Project, and found to have unsafe levels of asbestos and Fiberglass, reports obtained by The Post show. In the six months following Sept. 11, 332 firefighters required more than four weeks of leave for "significant" respiratory problems, according to FDNY records. About 60 percent of those remain on light duty or sick leave, or have retired.
>
> Some firefighters point out that health concerns prompted the city to condemn 890 privately owned cars and 91 FDNY vehicles that were parked near the trade center and deemed impossible to safely clean of all dust and contaminants. The firefighters say they had expected similar strict standards to be applied to the cleaning of those dusted firetrucks put back into city service.
> . . .
> *[FIRE HEROES' TRUCKS STILL TAINTED BY WTC DUST, By AL GUART, 8/25/02, NY Post]*

New York Committee for Occupational Safety and Health and Labor Unions

The New York Committee for Occupational Safety and Health (NYCOSH) played a leading role advising fire, rescue, and construction workers at Ground Zero that conditions were not safe, and that HEPA respirators were needed. This was despite the OSHA assurances that there were little air exposure hazards, based on the flawed EPA air tests which were unreadable and useless for the more heavily contaminated air samples. NYCOSH industrial hygienist staff spoke out to the press, issued fact sheets, and set up comprehensive web pages at www.NYCOSH.org to get the message out:

> 9/19/01
> The New York Committee for Occupational Safety and Health (NYCOSH), a coalition of 200 local unions and individual health and safety experts, issued guidelines to thousands of its members yesterday on how to protect themselves during the clean-up, which could

take a year or more.

"It virtually goes without saying that the smoke has toxic ingredients," said Jonathan Bennett, the coalition's public affairs director. "You have toxic gases versus particulate matter (like soot and asbestos). Particulate respirators don't protect people from carbon monoxide, for example."

Recommendations in the eight-page NYCOSH fact sheet include proper use of non-disposable respirators with frequent filter changes, goggles, and skin protection. Workers are urged to change clothes before going home. [

. . .

[Unknown Health Dangers Presented by 'Toxic Stew', INTERPRESS SERVICE September 19, 200, http://www.thepioneer.com/international/sept22_toxic.htm]

10/3/01

"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 industrial 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.

. . .

[Air Near Ground Zero Is Rated Safe by Feds, By Paul H.B. Shin, NY Daily News, October 3, 2001]

10/28/01

Seven weeks after the terrorist attacks on the World Trade Center about 400,000 tons of rubble and steel have been removed, but the site still smolders and there is some concern about the dioxins, PCBs, benzene, sulfur dioxide and lead emitted at the 16-acre site.

"We're highly critical and highly concerned, there's a lack of safety protective equipment and while some major concerns have been addressed there is a long way to go," David Newman, an industrial hygienist with the New York Committee for Occupational and Safety Health, told United Press International. "These heroes should not be subject to disease or accidents."

. . .

[WTC's toxic exposure a worry, By Alex Cukan UNITED PRESS INTERNATIONAL, 10/28/0, http://www.upi.com/view.cfm?StoryID=28102001-030950-8046r]

On 1/14/02, NYCOSH in conjunction with the Center for the Biology of Natural Systems at Queens College and the Latin American Workers' Project opened a mobile medical monitoring

unit for WTC cleanup workers.

> 1/14/02
> The project was initiated in response to concerns about day laborers and other workers performing clean-up tasks. Clean-up workers are particularly vulnerable to hazards arising from contact with toxic substances in the debris at Ground Zero, according to NYCOSH Director Joel Shufro. "Many day laborers are Spanish-speaking immigrants with little health and safety training," he said. "The medical unit goes straight to the problem area, offering the basic medical and educational resources the clean-up crews need."
>
> "We are aiming to help the most neglected, least protected workers, who might otherwise receive no medical care for occupational health problems. As they cleaned, they stirred up and inhaled injurious dusts. We want to identify their illnesses and provide them with properly fitting respirators to protect themselves in the future," said Steven Markowitz, MD, an occupational medicine physician who is directing the medical team from the City University of New York.
> . . .
> *[NYCOSH/CBNS joint press release, WTC Medical Monitoring for Building Cleanup Workers, http://cbns.qc.edu , www.NYCOSH.org]*

NYCOSH continues to play a leading role in protecting workers contending with WTC fallout exposure and medical problems.

Other unions were also active in the immediate days after 9/11, urging workers to wear proper respiratory protection, despite the OSHA and EPA. For example, the National Hazmat Operating Engineers National Hazmat Program distributed a flyer[33] on the asbestos hazards.

> 9/01
> The EPA has reported airborne asbestos results in NY that are all below the current OSHA standard, although asbestos fibers were detected in some samples. For comparison, the concentrations found in historical workplaces that produced disease were usually hundreds of times greater than the current OSHA standard.
>
> Do I need to take precautions? Yes! Not enough air sam ples have been taken to say anything definite about the possible exposures. Also, some debris may have much more asbestos in it than others. Finally, the direction and strength of the wind is important.
>
> What should I do to protect myself? Prot ect your lungs by wearing a respirator. Many rescue personnel have been wearing paper respirators. No paper respirators are approved for use with asbestos. Respirators with one strap are not acceptable either. Permanent, half-face respirators with disposable cartridges are acceptable, if NIOSH-approved. The cartridges must be marked as P100 to assure adequate protection.
>
> Wearing a disposable suit over your clothes will prevent taking the asbestos-containing dust home. Tyvek® is the most widely used material for suits in the asbestos abatement industry. In this present situation, Tyvek® suits without booties should be worn.

HP Environmental group of scientists

HP Environmental lead a team of scientists who took samples around 9/21/01 from several interior and exterior locations at and up to 3 blocks away from Ground Zero. These scientists and industrial hygienists included: Hugh Granger, Ph.D., CIH and Piotr Chmielinski, CIH of HP Environmental; Tom McKee, Ph.D. of Scientific Laboratories; Jim Millette, Ph.D. of MVA, Inc.; and George Pineda, CIH of ET Environmental. Their study has been submitted for publication.[34]

When EPA did its air tests for asbestos in those early days, the filters they collected the asbestos samples on were clogged with so much soot and other particulates that the laboratory analyst could not see the asbestos fibers. The asbestos fibers were covered up by the other particulates. EPA chose to just discard these samples and not try to read them. Thus, EPA only reported air tests for asbestos from the filters that had lower concentrations of total particulates, and thereby lower concentrations of asbestos. This gave highly biased results on the low side, since the filters which were overloaded would also have higher asbestos concentrations.

HP Environmental used a more sophisticated version of EPA's own test methods to get around the problem of the filters being overloaded and unreadable. They used the indirect transfer method, EPA level 2. The particulates were transferred from the filter and separated so that the asbestos fibers could be seen. News accounts of the better EPA method used by HP Environmental follow:

> 10/5/01
> The study, by the Virginia firm HP Environmental, found that the force of the explosions apparently shattered the asbestos into fibers so small that they evade the EPA's ordinary testing methods. The EPA tests for asbestos particles greater than a half micron in size, a spokeswoman says. But the study concluded that there is such an overwhelming concentration of those ultrasmall particles that many are being missed by standard microscopy techniques. "This stuff was just crushed, just pulverized," says lead author Hugh Granger. "As it turns out, when we now measure and look for these very small fibers in the air and buildings, we find them, and we find them in uniquely elevated concentrations."
> . . .
> *[Newsweek, MSNBC, 10/5/01, Is Ground Zero Safe? New study suggests more asbestos at disaster site than previously revealed, by David France]*
>
> ---
>
> 10/9/01
> The collapse of the twin towers pulverized much of the asbestos into such microscopic particles that many fibers were not large enough to be caught in tests done by government safety monitors, says a team of scientists from HP Environmental, Inc., a Virginia-based company that oversaw toxicology analyses at the World Trade Center after the 1993 attack. The firm spent 15 days last month studying health hazards faced by cleanup crews working for a real estate company that owns two office buildings north of Ground Zero.

"In the beginning we were getting clean results, or no [asbestos]," said Piotr Chmielinski, one of the scientists who worked on the study. "until we discovered that a lot of dust and other particulates in our samples were obscuring the tiny asbestos fibers in the background."

. . .

The team took 11 air samples on different floors of two buildings that were up to 3 blocks from the Trade Center site. Using the cheaper and less exact method, only two of those samples revealed asbestos levels higher than federal permissible exposure limits.

. . .

[Asbestos Higher in Newer Test, 10/9/01, by Juan Gonzalez, NY Daily News]

10/22/01

Panic buttons were pressed last week when a company called HP Environmental reported higher asbestos levels than the EPA, which had declared most of Battery Park City safe. Turns out HP had included tiny asbestos particles, which the EPA and many doctors don't consider dangerous. Others, like Philip Landrigan of the Mount Sinai School of Medicine, say just the opposite: "It's been substantiated by 30 or 40 years of research that the smaller fibers are the ones that can penetrate most deeply into the lungs."

So, who to believe? HP showed its results to downtown neighbors, but the Board of Ed chose to reopen Stuyvesant High School anyway. "I'm very concerned," says Stuyvesant parents' association president Marilena Christodoulou. "We're insisting on daily monitoring -- not just for asbestos but for lead and fiberglass."

[Note that Stuyvesant High School was later found to have extremely high levels of asbestos long after children resumed classes there.]

. . .

[The Air Down There, 10/22/01, NY Magazine, By Robert Kolker, http://www.newyorkmetro.com/nymetro/news/sept11/features/5291/]

12/3/01

Study by HP Environmental uses more sensitive test methods, finds higher asbestos than EPA, and smaller particle sizes

. . .

As an example, when HP Environmental tested air in two buildings that were up to 3 blocks from Ground Zero, only 2 of 11 samples showed asbestos above the limit using the EPA method, but the more sensitive method by HP Environmental showed 7 of 11 samples had hazardous levels.

The complete study was posted on the American Industrial Hygiene Association (AIHA) website for a total of 5 hours on 9/3/01 before it was removed. The AIHA has not admitted its removal was motivated by the fact that it conflicted with Governor Whitman's press release of the same day claiming no hazardous exposures to asbestos except at Ground Zero. . . . [Jenkins, 12/3/01 memorandum. See App. 3 of this report]

Center for the Biology of Natural Systems, Queens College, Paul Bartlett, Ph.D.

Although New York has a high concentration of colleges and universities, very few professors or research staff opposed EPA during the two months after the disaster. This may reflect the extreme importance of the federal research dollar. At the Center for the Biology of Natural Systems (CBNS), Queens College, Flushing, NY Barry Commoner, Ph.D. and Paul Bartlett, did go on record. Commoner spoke about the hazards of asbestos and the problem of the WTC dusts becoming stirred up in a 9/28/01 NY Daily News article.

In particular, Bartlett, a PCB expert, went on record alerting the public to EPA's own test results. It had taken a Freedom of Information Act request to obtain them. In Juan Gonzales' landmark article of 10/26/01, Bartlett contributed the following

> 10/26/01
> Toxic chemicals and metals are being released into the environment around lower Manhattan by the collapse of the World Trade Center towers and by the fires still burning at Ground Zero, according to internal government reports obtained by the Daily News.
>
> Dioxins, PCBs, benzene, lead and chromium are among the toxic substances detected in the air and soil around the WTC site by Environmental Protection Agency equipment sometimes at levels far exceeding federal levels, the documents show.
>
> EPA monitoring devices also have found considerable contaminants in the Hudson River in the water and in the sediment especially after it rains.
>
> Six weeks after the WTC attack, benzene a colorless liquid that evaporates quickly and can cause leukemia, bone marrow damage and other diseases in long-term exposure conti nues to be released into the air in plumes from the still-burning fires at relatively high levels.
>
> The federal Occupational Safety and Health Administration's permissible exposure limits for workers handling benzene over an eight-hour day is 1 part per million.
>
> But the EPA documents reveal that the standard has been exceeded by considerable margins.
>
> On Oct. 2, for example, benzene levels from three spots around Ground Zero were measured at 42, 31 and 16 times higher than the OSHA standard. On Oct. 12, one reading measured 21 times higher.
>
> The highest benzene level was recorded Oct. 11 58 times higher than OSHA's permissible exposure limit.
>
> The documents obtained by The News detail the presence of many hazardous substances many of them odorless in levels above or approaching EPA or OSHA safety standards.
>
> "Yes, they are high," said EPA spokeswoman Mary Mears, when asked to comment on the hazardous-substance readings contained in her agency's documents. "But you get a

little distance from the plume and they go dramatically down." When questioned, though, Mears conceded that shifting winds sometimes blow the plume directly at workers at the site.

. . .

The effects of exposure to any hazardous substance depend on dose, duration, how the person is exposed, personal traits and habits, and whether other chemicals are present, according to the Agency for Toxic Substances and Disease Registry, a branch of the Department of Health and Human Services. In many instances, government scientists believe, short-term exposure is not a real concern, though other experts believe small amounts of certain carcinogenic substances eventually can cause serious disease.

The EPA documents, which include hundreds of pages of daily monitoring reports, were obtained under a Freedom of Information Act request by the New York Environmental Law and Justice Project and made available to The News.

. . .

"What I've seen of the data is troubling," said Paul Bartlett, an expert on PCBs and dioxins at the Queens College Center for the Biology of Natural Systems. He added that in his opinion, whatever monitoring the EPA has conducted has been inadequate.

"Their detection limits are aimed at threshold levels for occupational exposure," Bartlett said. "They aren't treating this as a disaster, so they're not asking what extent and how far are people being exposed or who is possibly being affected by the releases of chemicals. They're just checking what emissions are exceeding regulations."

"[I'm most concerned about the soup effect of all these toxic chemicals," said Monona Rossol, an industrial hygienist who works with the Environmental Law and Justice Project. "No one's worrying about the combination of these things on the workers."

"When we are finding these readings that have some significant level to them, they are primarily within the work area," said EPA spokeswoman Mary Helen Cervantes. "As for the cumulative impact of these chemicals, that is an area of science and study and research that we really have not developed methodologies to do that kind of assessment."

"I don't know how the government defines a Superfund site," Bartlett said. "But I'd certainly treat Ground Zero like one."

. . .

[A Toxic Nightmare At Disaster Site, Air, water, soil contaminated, by Juan Gonzales, NY Daily News, 10/26/01]

This article, coming from a scientist putting into context the EPA's own results, evoked an immediate inquiry from Senator Clinton to Administrator Whitman:

10/26/01

I was deeply alarmed by a report in today's New York Daily News that Environmental Protection Agency's own monitoring at, and around, Ground Zero has shown levels of benzene, lead, and sulfur dioxide in air samples that significantly exceed EPA and OSHA standards. The Daily News also reports that EPA has found high levels of dioxin, PCBs and metals in water being discharged into the Hudson River from the site. This is in addition to previous concerns regarding high levels of asbestos in air and dust

samples at, and around, Ground Zero.
. . .
Understandably, many are deeply concerned about potential health risks associated with poor air quality at, and around, Ground Zero and I share this concern. It is my worry that poor air quality, in addition to any immediate health impacts, may have devastating long-term health effects, particularly for those that are spending a great deal of time in the area. . . . While I understand that the most serious air pollution is concentrated directly at the site, I believe that local residents and parents with children who attend school in the area also deserve not only timely and accurate information about local air quality but also adequate protection from any potential health risks.
. . .
[letter from Senator Clinton to Administrator Whitman, 10/26/01]

The 10/26/01 article by Juan Gonzales in the NY Daily News was the turning point for citizens, who finally realized that EPA was not credible in its blandishments that there were no health risks. EPA immediately went on the defensive, attempting to rebut this news story in testimony before the New York City Council Environmental Protection Committee on 11/1/01, and then before the New York State Assembly on 11/26/01, claiming that even if standards had been exceeded, the OSHA and EPA standards were set at levels many times higher than related to health risks:

11/1/01
I'm sure that many of you saw the Daily News headlines last Friday heralding a "Toxic Zone" at ground zero. While the data in the story were accurate, the interpretation of the data and the context was not.

EPA and Occupational Safety and Health Administration standards are set many times below the level at which you would expect health impacts. Our results tell us that these chemicals are present at ground zero at levels that sometimes exceed a federal standard.
. . .
[Statement of Kathleen Callahan, Acting Deputy Regional Administrator, Region 2, Before the New York City Council Environmental Protection Committee, 11/1/01, http://www.epa.gov/region02/news/speeches/011101k.htm]

11/26/01
I'm sure that many of you saw a recent newspaper headline heralding a "Toxic Zone" at ground zero While the data in the story were accurate, the interpretation of the data and the context was not

The story focused on a small number of sampling results with the highest contaminant readings. The story failed to report, however, that EPA has taken thousands of samples that do not exceed federal standards or guidelines. In addition, the sampling results highlighted in the article are snapshots of the levels of certain chemicals associated with burning such as benzene, dioxin and sulfur dioxide at a moment in time. They were taken right in the plume on the debris pile, at ground level. EPA and Occupational Safety and Health Administration standards are set many times below the level at which you would expect health impacts.

. . .
[Testimony of Kathleen Callahan, Acting Deputy Regional Administrator U.S. Environmental Protection Agency, Before the New York State Assembly, 11/26/01] [35]

Bartlett continued assisting citizens, including working with the NYCOSH mobile health unit testing and counseling workers cleaning up the rubble at Ground Zero, as well as offering testimony on behalf of concerned parents at contaminated schools. During the early months after 9/11. Bartlett maintained a comprehensive informational web site which citizens could access for information. He assisted local NYC citizens and scientists in determining the best test methods for a wide range of WTC-related toxics and their hazardous levels of concern.

Local Elected NYC Officials

Several local New York City elected officials recognized early on that there was some problem with the EPA and NYC messages that there were no hazards. In particular, NYC Councilmember Kathryn Freed helped set up quality independent testing of two different apartment buildings. One was 3 blocks southwest from Ground Zero, facing it. The other was 4 blocks north, with windows primarily facing north, away from Ground Zero. Freed was unable to get any cooperation from the NYC DEP in gaining access to these apartments, and had to "sneak the scientists in" on 9/18/01 to collect samples.[36]

The "Ground Zero Elected Officials Task Force" (GZTF) was formed on 9/15/01, chaired by Representative Nadler, and including Manhattan Borough President Virginia Fields, NYS Assembly Speaker Sheldon Silver, NYS Senator Martin Connor, NYS Senator Tom Duane, NYS Assemblymember Deborah Glick, NYC Councilmember Kathryn Freed, NYC Councilmember Margarita Lopez, NYC Councilmember (elect) Alan Gerson, NYC Community Board 1 Chairperson Madelyn Wils. The purpose was to "fill the gaps" left by the federal and local response.[37]

The GZTF held a press conference on November 19 to announce the results of the independent tests on the 2 apartments where Freed had gained access. The following is a story in the NY Daily News:

11/20/01
The group cited a study of dust and air samples taken Sept. 18, a week after the Trade Center attack, at a seven-story apartment building at 45 Warren St. four blocks north of Ground Zero and a 30-story apartment building at 250 South End Ave. in Battery Park City, just southwest of Ground Zero.

One of the experts who conducted the study was John Kominsky, a chemical engineer based in Cincinnati. Kominsky said the levels of asbestos found in the two buildings far exceeded the maximum level the Environmental Protection Agency deems permissible in schools that have undergone asbestos remediation.

> That standard is 70 "structures" fiber, bundle or fine material per square millimeter.
>
> The levels found at 45 Warren St. ranged from 279 to 376 structures per square millimeter. At 250 South End Ave., the levels ranged from 6,277 to 10,620 structures per square millimeter.
>
> Kominsky said those levels would cause "significant health risks" if there was long-term exposure. He advised that anyone cleaning up those buildings should know the "proper techniques" for handling asbestos.
>
> . . .
>
> *[Safety Guidelines Set For WTC Site Workers, Dems seeking cleanup czar, New York Daily News, 11/20/01, By GREG GITTRICH and FRANK LOMBARDI]*

In particular, U.S. Representative Jerrold Nadler with his staff became strong advocates for a government-paid cleanup of all indoor spaces of New York City affected by WTC fallout. Nadler has continued to this day in his fight, issuing numerous statements, providing testimony, sponsoring hearings, and preparing a comprehensive white paper documenting the problems from WTC contamination. Nadler held a press conference on 2/10/03 addressing concerns over the failure of EPA to address WTC contamination of workplaces:

> 2/11/03
>
> Conditions in workplaces and other indoor spaces near the site of the destruction of the World Trade Center are still being neglected nearly a year and a half after the disaster, Rep. Jerrold Nadler (D-N.Y.) said Feb. 10.
>
> . . .
>
> Presenting data obtained under a freedom-of-information request by the New York Environmental Law & Justice Project, Nadler said the city had received indoor environmental quality reports from only 218 out of 1,900 downtown buildings below Canal Street.
>
> Even those replies to a Feb. 12, 2002, city request to landlords included many incomplete or inadequate reports, and DEP "has not issued a single citation" for failure to respond to the request, Nadler said. In one instance, he reported, a landlord's reply consisted of simply reporting that the building's windows had been closed during the disaster and there had been "a minimum" of dust infiltration.
>
> . . .
>
> *[BNA, Daily Environment Report, 2/11/03, Nadler Says Workplaces Neglected In World Trade Center Dust Cleanup.]*

Senator Clinton played a key role by calling for EPA oversight hearings on 12/4/01. Earlier, on 10/26/01, the same day that the story in the NY Daily News appeared (Toxic Zone, by Juan Gonzales), she wrote to EPA Administrator Whitman demanding an explanation. See above. The hearings she initiated resulted in EPA forming an indoor air task force. This was the first time EPA or any other governmental agency agreed to take indoor air measurements, where confined spaces drastically increase airborne concentrations of hazardous WTC constituents:

> 12/4/01
> Senator Hillary Rodham Clinton (NY) called on the Committee to hold a hearing early next year to examine possible environmental health problems at and around Ground Zero in lower Manhattan. Environmental Protection Agency (EPA) Administrator Christine Todd Whitman was testifying before the EPW Committee.
>
> At today's hearing, Senator Clinton remarked, with regard to conditions around Ground Zero, "Kids are going to school, the air is being tested, but there's a lot of what we're now calling 'World Trade Center cough,' and respiratory and asthma problems. Mr. Chairman, I think this will be a good matter to hold a hearing about when we get back after the holidays, so we can try to figure out what we should be doing and how we can provide good information to the businesses and families located in the area."
> . . .
> *[Press release, Senator Clinton Calls For Senate Hearing On Environmental, Health Concerns At Ground Zero, Senator Reiterates Concern About Potential Long-Term Health Risks . . . , 12/4/01, http://clinton.senate.gov/news/2001/12/2001C05A41.html]*

Senator Clinton has continued with her strong advocacy on behalf of the living victims of the WTC, fighting for better health monitoring and treatment of firefighters and other rescue workers, and the cleanup of firehouses, fire trucks, and other environments of the first responders still contaminated with WTC fallout.

New York Daily News and selected other press

The New York Daily News took a lead role in alerting citizens of the hazards, countering EPA and NYC claims. On September 13, 2001, they published an article extensively quoting Dr. Landrigan of the Mt. Sinai School of Medicine on asbestos hazards, contrasting his statements with those of Mayor Giuliani and the NYC Health Commissioner. See the above discussion on Dr. Landrigan for the complete text. The efforts of one journalist working with the Daily News, Juan Gonzales, is discussed later discussion in this section.

The NY Daily News has continued to support aggressive journalism on the issue throughout, including a recent report on the EPA IG 1/27/03 report:

> 3/18/03
> The Environmental Protection Agency failed to gather sufficient evidence before declaring the air around Ground Zero "safe to breathe" in the days after the collapse of the twin towers, federal documents reveal.
>
> The EPA inspector general's office found that the agency based its conclusion on a cancer risk level 100 times greater than the traditional standard used to determine acceptable public exposure to toxic contaminants.
>
> The confidential documents, obtained by the Daily News, also say the EPA did not address short-term health concerns - and had no data on more than half of the pollutants that scientists believe were thrown into the air by the towers' collapse.

> EPA spokeswoman Mary Mears said yesterday it would be inappropriate to answer questions about "a few pages of an internal work document from an independent office." But Mears added: "We did not then believe and we do not now believe, given the data that we've collected, that there is risk of long-term health problems to the general public."
>
> The inspector general's probe is ongoing and the findings could change. But the documents, dated Jan. 27, summarize some of the preliminary conclusions. The goal of the probe is to determine whether the EPA adequately told the public about health risks near Ground Zero.
>
> After the Sept. 11 attacks, EPA chief Christie Whitman told the public that the blizzard of ash and debris settling around the city was not contaminating the air.
> . . .
> *[EPA ripped on its 9/11 all clear, By GREG GITTRICH, New York Daily News, 3/18/03]*

While Greg Gittrich of the NY Daily News covered this important story for its readership, the other NYC newspapers did not cover it at all, such as the New York Times and the Wall Street Journal. This is despite the fact that the story was covered by the Sacramento Bee (a major story), syndicated by the Reuters News Service, and heard on National Public Radio, as well as appearing in the trade publication Inside EPA.[38]

Throughout the period after 9/11, the New York Times has avoided providing space to those opposing the EPA and NYC DOH/DEP claims about safety. An excellent review article about the press coverage of hazards to citizens from WTC contaminants is given below:

> The same day Daily News readers were greeted by the "Toxic Nightmare" column, New York Times readers saw this story: "Air quality in Lower Manhattan has gradually improved since the early days.... But at certain times, under certain conditions--usually for brief periods--the bad air still returns.... [M]ost people need not worry."
> . . .
> Gonzalez has his own assessment of the competition's coverage. "The Times was and has continued to be total apologists for the EPA on just about everything."
> . . .
> In the end, readers must have wondered if the two newspapers were covering the same event.
> . . .
> Ask the reporters who have followed the health issue for their predictions on how the story will end, and the responses are as diverse as the coverage.
>
> "I think it's going to fade away," predicts the Times' Andrew Revkin *[New York Times health reporter]*.
> . . .
> *[Stranahan, S. (Jan./Feb., 2003) Air of Uncertainty. American Journalism Review. http://216.167.28.193/article_printable.asp?id=2746]*

Other NYC news organizations provided aggressive coverage to WTC health matters in the early days, such as the NY Post, Newsday, the Village Voice, NY Magazine, and undoubtedly others. Television and radio also provided voice in part to opposing views, that of scientists and health professionals countering EPA claims. Documenting their contributions is more difficult. The press became more aware of the problem as the months progressed, and produced in-depth coverage. Many of these stories are quoted throughout this report.

Juan Gonzales, journalist

Juan Gonzales, writing for the NY Daily News, was responsible for the ground breaking story on 10/26/01 that was the turning point in the public's perception of hazardous exposure problems to ordinary citizens from WTC fallout. This story, Toxic Zone, was quoted earlier in this section. Gonzales went on to break many important stories relating to WTC toxic contaminants. He understands the technical issues, and could cut through the double talk designed by EPA to discredit its critics. His stories are quoted throughout this report.

Unlike other journalists, he shared documents and other information with other advocates and scientists working on the issue, putting the overall progress of the WTC cleanup above considerations personal efficiency or fear that his own exclusive future publication use of this material might be compromised.

Gonzales is co-host of the program *Democracy Now*, which also covered the environmental impact of the WTC collapse. He wrote the book *Fallout, the Environmental Consequences of the World Trade Center Collapse*, which uncovers the lies and deceptions by public officials who have continued to needlessly expose citizens to WTC toxins. His book details the problems he and other journalist had in even getting stories to press that were critical of the government's pronouncements that there were no health hazards in lower Manhattan or the surrounding boroughs.

Other "First Responders for Public Warning"

There were other "First Responders for Public Warning" who themselves (including their families) were not exposed to WTC fallout, but were horrified by the false and misleading message of EPA and NYC officials, but who were not directly heard in these important early days after 9/11.

Many were thwarted in their efforts to gain a public hearing. One story came from an industrial hygienist, who had contacted and was working with a reporter from a television station. He was scheduled to appear in an interview that included a medical doctor. When he appeared at the television studio, he was told that the reporter was no longer with them, and that there would be no interview.

Others could not speak out directly for legitimate reasons. These individuals instead chose to work behind the scenes, providing technical guidance and review of documents for those who were publically visible. Without their sacrifice of time (some were on call 24-hours per day), the people who were visible simply would not have had the necessary background to adequately inform the public. We thank you here.

Not last or least are the laboratories in both New York City and around the country who mobilized in an Herculean effort to test samples for citizens as well as governmental agencies. These labs did all possible to accommodate citizen requests, advise them on sampling techniques, etc. For them, it was the war zone long after people in the rest of NYC and the country turned their attention to other things. The labs operated 24 hours per day. When it became obvious that the laboratories should be offering EPA's ultrasonification extraction test for carpeting and other soft materials, they quickly made this test more universally available, offering reasonable prices, later dropping their price by more than a half.

EPA and NYC pressure on press, suppression of dissenting opinions

EPA has spoken openly about opposing those who spoke out against their official word. There are many stories from individuals, such as department heads being put on the line by EPA for statements by their researchers (the government holds the purse strings of many grants). The following is a quotation of EPA's Bonnie Bellow, who instead of simply writing a letter to the editor of a newspaper, attempted to wield government power directly by complaining to the editor:

> As they had with Gonzalez's column, EPA officials criticized Schneider's stories, saying he misrepresented the data and sensationalized the health implications. "I was disturbed and frustrated," says spokeswoman Bonnie Bellow, who complained to Schneider's editors.
> . . .
> *[Susan Q. Stranahan (January/February 2003) Air of Uncertainty, American Journalism Review, http://216.167.28.193/article_printable.asp?id=2746]*

> If government officials hoped to minimize fears that lower Manhattan was no longer a safe place to live or work, they had plenty of help from New York's media. Virtually the only local source of investigative coverage on environmental hazards has been Juan Gonzalez, a columnist for the New York Daily News. On October 26, he made the front page with "A Toxic Nightmare at a Disaster Site," which detailed the EPA tests' findings of notable quantities of hazardous benzene, as well as dioxin levels discharged from a sewer pipe into the Hudson River that were more than five times higher than any previously recorded in New York Harbor.
>
> That day, the mayor and EPA officials held a joint press conference to refute the story;

spokespeople claimed that "spikes" in toxin levels did not indicate potential health hazards. Giuliani's views were more than incidental to the Daily News, whose executive editor, Michael Goodwin, is married to a Giuliani appointee and whose editorial-page editor, Richard J. Schwartz, previously worked in City Hall, where he authored Giuliani's welfare policies. One late-September editorial was adamant that officials in charge of rebuilding at the site should minimize environmental reviews and any other "red tape" obstructing redevelopment.

. . .

[Toxic haste, Staten Island Advance, Alyssa Katz, 2/25/02, http://www.americanprospect.com/print/V13/4/katz-a.html]

I: THE COVERUP – THEORIES AND MOTIVATIONS

"At our late December meeting with the (then) Chief of Staff, she acknowledged that the content of the WTC press releases was heavily influence by the Council on Environmental Quality (CEQ). In her view, the ultimate responsibility for content of press releases resided with the former Public Information Officer (now with DOI), who denies such authority. Have asked signed copy of interview write-up with Chief of Staff. . . . Working with OI, e-mails (from 9-11-01 to 12/31/01) for former EPA Public Information Officer have been pulled and will be reviewed: paper copies of selected e-mails indicate CEO dictated the content of early press releases – 100 percent of what CEO added was added: 100 percent of what CEO deleted was deleted." ***[1/27/03 EPA IG report]***

This section addresses theories why EPA and New York City officials concealed information on the hazards of WTC fallout, gave dangerous advice to the public on how to protect themselves, and later all but admitted their failure to warn the public by telling falsehoods about what they had said and advised citizens in the past. This constitutes a coverup.

The EPA IG report of 1/27/03 made a preliminary attempt to identify who was controlling statements by EPA and Administrator Whitman. In footnotes, the following information was given:

> Current Work Plans
>
> At our late December meeting with the (then) Chief of Staff, she acknowledged that the content of the WTC press releases was heavily influence by the Council on Environmental Quality (CEQ). In her view, the ultimate responsibility for content of press releases resided with the former Public Information Officer (now with DOI), who denies such authority. Have asked signed copy of interview write-up with Chief of Staff.
> . . .
> Working with OI, e-mails (from 9-11-01 to 12/31/01) for former EPA Public Information Officer have been pulled and will be reviewed: paper copies of selected e-mails indicate CEO dictated the content of early press releases 100 percent of what CEO added was added: 100 percent of what CEO deleted was deleted. Once all e-mails have been analyzed, we plan to follow up one more time with the White House Counsel's Office for an interview with Sam Thornstrum (CEQ); we have had multiple calls with the White House Counsel in an attempt to interview CEQ on this issue.
> . . .
> *[EPA IG report, 1/27/03]*

Council on Environmental Quality role

The EPA IG report states that the White House Council on Environmental Quality (CEQ) controlled what EPA said (and is saying) about hazards to citizens from the WTC hazard. But this does little to elucidate the motivations behind the systematic denials of hazards, exposure of citizens, and failure to clean up and test for toxic substances. Who was behind the CEQ? Were there other actors involved not controlled by the CEQ?

The following is a description of the function of the CEQ from the White House web site:

> The Council on Environmental Quality coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives. The Council's Chair, James L. Connaughton who was appointed by the President with the advice and consent of the Senate, serves as the principal environmental policy adviser to the President. In addition, CEQ reports annually to the President on the state of the environment; oversees federal agency implementation of the environmental impact assessment process; and acts as a referee when agencies disagree over the adequacy of such assessments.
>
> Congress established CEQ within the Executive Office of the President as part of the National Environmental Policy Act of 1969 (NEPA). Additional responsibilities were provided by the Environmental Quality Improvement Act of 1970
>
> In enacting NEPA, Congress recognized that nearly all federal activities affect the environment in some way and mandated that before federal agencies make decisions, they must consider the effects of their actions on the quality of the human environment. NEPA assigns CEQ the task of ensuring that federal agencies meet their obligations under the Act. The challenge of harmonizing our economic, environmental and social aspirations has put NEPA at the forefront of our nation's efforts to protect the environment.
> . . .
> *[http://www.whitehouse.gov/ceq/]*

The CEQ would have a clear statutory mandate to coordinate and mediate environmental matters not involving the EPA in a non-disaster situation. However, after the declaration of disaster, the Federal Response Plan (FRP) was invoked, and FEMA and EPA had responsibility for this function. FEMA, in consultation with EPA, found that it was necessary to activate Emergency Support Function 10 (ESF #10), which designates EPA as the chair and coordinator of all environmental matters in the WTC disaster.

EPA already had the clear responsibility of coordinating all environmental disaster matters as part of the FEMA team. There is explicit language in the FRP itself as well as the EPA regulations defining EPA's role as chair and coordinator of all federal, state, and local environmental efforts in disasters involving hazardous substances, as discussed in Section V of this report. Many years prior to 9/11/01, EPA prepared and published numerous action plans for coordinating and

directing all environmental responses to terrorism, including bombings and weapons of mass destruction.

The CEQ is not one of the federal entities that is included in the FRP, and is not even included in the new Office of Homeland Security. The CEQ has never engaged in any such activities. From this we can conclude that the CEQ should not have had any contact with EPA whatsoever over the WTC disaster. To do so constituted acting outside of the statutory mandate of the CEQ, a violation of the Administrative Procedures Act.

White House interference theory

Any decisions to protect NYC citizens to a greater extent from asbestos exposures from WTC fallout would have major ramifications in future EPA decisions to protect citizens from asbestos. Furthermore, any decisions by EPA requiring more stringent cleanup or test methods would also affect litigation against the asbestos industry.

Although members of the current administration may have ties to the asbestos industry,[39] there is no available evidence directly linking them to interference in the WTC cleanup. Interference by the CEQ, described above, and as referenced in the EPA IG report of 1/27/03, can be interpreted as interference from the White House, since the CEQ is part of the White House.

There is evidence that such intervention by the White House in EPA matters has occurred in the past. Like the CEQ, the Office of Management and Budget (OMB) is also under the White House. The following by Pulitzer Prize winning journalist Andrew Schneider tells the story:

> The Environmental Protection Agency was on the verge of warning millions of Americans that their attics and walls might contain asbestos-contaminated insulation. But, at the last minute, the White House intervened, and the warning has never been issued. The agency's refusal to share its knowledge of what is believed to be a widespread health risk has been criticized by a former EPA administrator under two Republican presidents, a Democratic U.S. senator and physicians and scientists who have treated victims of the contamination.
>
> The announcement to warn the public was expected in April. It was to accompany a declaration by the EPA of a public health emergency in Libby, Mont. In that town near the Canadian border, ore from a vermiculite mine was contaminated with an extremely lethal asbestos fiber called tremolite that has killed or sickened thousands of miners and their families.
>
> . . .
>
> In a meeting in mid-March, EPA Administrator Christie Todd Whitman and Marianne Horinko, head of the Superfund program, met with Paul Peronard, the EPA coordinator of the Libby cleanup and his team of health specialists. Whitman and Horinko asked tough questions, and apparently got the answers they needed. They agreed they had to move ahead on a declaration, said a participant in the meeting.

By early April, the declaration was ready to go. News releases had been written and rewritten. Lists of governors to call and politicians to notify had been compiled. Internal e-mail shows that discussions had even been held on whether Whitman would go to Libby for the announcement.

. . .

Interviews and documents show that just days before the EPA was set to make the declaration, the plan was thwarted by the White House Office of Management and Budget, which had been told of the proposal months earlier. Both the budget office and the EPA acknowledge that the White House agency was actively involved, but neither agency would discuss how or why. The EPA's chief spokesman Joe Martyak said, "Contact OMB for the details." Budget office spokesperson Amy Call said, "These questions will have to be addressed to the EPA."

. . .

Both agencies refused Freedom of Information Act requests for documents to and from the White House Office of Management and Budget. The budget office was created in 1970 to evaluate all budget, policy, legislative, regulatory, procurement and management issues on behalf of the president.

Office interfered before

Former EPA administrator William Ruckelshaus, who worked for Presidents Richard Nixon and Ronald Reagan, called the decision not to notify homeowners of the dangers posed by Zonolite insulation "the wrong thing to do." "When the government comes across this kind of information and doesn't tell people about it, I just think it's wrong, unconscionable, not to do that," he said. "Your first obligation is to tell the people living in these homes of the possible danger. They need the information so they can decide what actions are best for their family. What right does the government have to conceal these dangers? It just doesn't make sense."

But, he added, pressure on the EPA from the budget office or the White House is not unprecedented. Ruckelshaus, who became the EPA's first administrator when the agency was created by Nixon in 1970, said he never was called by the president directly to discuss agency decisions. He said the same held true when he was called back to lead the EPA by Reagan after Anne Gorsuch Burford's scandal-plagued tenure.

Calls from a White House staff member or the Office of Management and Budget were another matter. "The pressure could come from industry pressuring OMB or if someone could find a friendly ear in the White House to get them to intervene," Ruckelshaus said. "These issues like asbestos are so technical, often so convoluted, that industry's best chance to stop us or modify what we wanted to do would come from OMB."

The question about what to do about Zonolite insulation was not the only asbestos-related issue in which the White House intervened. In January, in an internal EPA report on problems with the agency's much-criticized response to the terrorist attacks in New York City, a section on "lessons learned" said there was a need to release public health and emergency information without having it reviewed and delayed by the White House.

It was the White House budget office's Office of Information and Regulatory Affairs that derailed the Libby declaration *[of a health emergency that would initiate the removal of Zonolite insulation from attics in Libby, Montana]*.

. . .

Whitman, Horinko and some members of their top staff were said to have been outraged

at the White House intervention.

"It was like a gut shot," said one of those senior staffers involved in the decision. "It wasn't that they ordered us not to make the declaration, they just really, really strongly suggested against it. Really strongly. There was no choice left."

She and other staff members said Whitman was personally interested in Libby and the national problems spawned by its asbestos-tainted ore. The EPA's inspector general had reported that the agency hadn't taken action more than two decades earlier when it had proof that the people of Libby and those using asbestos-tainted Zonolite products were in danger. Whitman went to Libby in early September 2001 and promised the people it would never happen again.

"We want everyone who comes in contact with vermiculite from homeowners to handymen to have the information to protect themselves and their families," Whitman promised.

Suits, bankruptcies grow

Political pragmatists in the agency knew the administration was angered that a flood of lawsuits had caused more than a dozen major corporations including W.R. Grace to file for bankruptcy protection. The suits sought billions of dollars on behalf of people injured or killed from exposure to asbestos in their products or workplaces.

Republicans on Capitol Hill crafted legislation expected to be introduced next month to stem the flow of these suits.

Nevertheless, Whitman told her people to move forward with the emergency declaration. Those in the EPA who respect their boss fear that Whitman may quit. She has taken heat for other White House decisions such as a controversial decision on levels of arsenic in drinking water, easing regulations to allow 50-year-old power plants to operate without implementing modern pollution controls and a dozen other actions which environmentalists say favor industry over health.

. . .

[White House budget office thwarts EPA warning on asbestos-laced insulation, BY ANDREW SCHNEIDER, St. Louis Post-Dispatch, 12/27/2002, http://www.stltoday.com/stltoday/news/stories.nsf/news/4C6A12EDD4DB434486256CAF00051BD1?OpenDocument&highlight=2%2Casbestos&headline=White+House+budget+office+thwarts+EPA+warning+on+asbestos-laced+insulation]

As a footnote to this story, EPA finally was allowed to issue the Zonolite attic insulation warning. That warning was issued on May 20, 2003. [40] On the same day, Governor Whitman met with President Bush at the White House and gave him her letter of resignation as administrator of EPA.[41] Her resignation was effective June 27, 2003.

Stock Market theory of coverup

A common theory for the coverup of hazards from WTC fallout was that it was important to get the Stock Market up and running as soon as possible after the attack. This would be either for the purpose of not allowing terrorist to know the degree of environmental damage they could inflict by something as simple as a building implosion, or just to protect the financial interests of the corporate elite.

There are numerous press statements by EPA and other officials coupling statements about the safety and lack of hazards after the attack along with assurances that the Stock Market could reopen as scheduled. The Stock Market did reopen on 9/18/01, after a fast and dirty cursory cleanup. However, the problem with the Stock Market theory is that EPA and NYC officials continued their obfuscations of the facts long after the Stock Market reopened on 9/18/01.

Whitman's Citicorp stock ownership theory of coverup

The former EPA hazardous waste ombudsman, Robert Martin, and his former chief investigator Hugh Kaufman leveled charges that Administrator Whitman was responsible for a WTC hazard coverup because Whitman owned stock in Citicorp. These allegations came during a bitter court battle in which Martin was attempting to prevent his job from being transferred to EPA's Office of the Inspector General.

The finding in the EPA IG 1/27/03 report about the CEQ's involvement in Whitman's press releases dispels this Citicorp theory. Whitman's statements about the WTC appear to have been controlled and/or written by the White House's Council on Environmental Quality (if not others as well).

There are other problems with the Citicorp theory. Even before the WTC collapse, Kaufman and Martin made the same Citicorp conflict-of-interest allegations against Whitman for her decisions in a Superfund site in Colorado. In addition, they raised the same Citicorp stock ownership conflict-of-interest charges against the NYC Board of Education Chancellor.

With more details later, the following summarizes the Kaufman/Martin Citicorp theory:

a. In press accounts, Kaufman and Martin claimed Whitman had conflicts of interest by her alleged relieving some financial liability for the owners of the Shattuck Superfund Site, a former radioactive extraction facility in Colorado. This was because Shattuck was owned by Citicorp. However, the parties, including Shattuck and EPA, had reached an agreement in principle in December 2000, before Whitman came to EPA.

b. On 10/10/01, Kaufman and Martin criticized the December, 2000 final remedy for the Marjol Battery Superfund Site, located in Throop, Pennsylvania, because of Whitman's Citicorp-conflicts of interest.

c. After the WTC collapse, Kaufman and Martin accused Whitman of conflicts of interest in saying that the air was safe, since the World Trade Towers were insured by Travelers Insurance, a subsidiary of Citicorp.

d. Kaufman and Martin also accused the NYC Board of Education Chancellor of conflicts of interest for reopening the schools too soon after the WTC collapse, because he also owned Citicorp stock.

Press coverage of Citicorp stock ownership theory of coverup

7/16/02

Independent federal investigators concluded there is no basis for an ombudsman's claims that Environmental Protection Agency Administrator Christie Whitman had a conflict of interest in three large-scale cleanups, including the World Trade Center.

The report by the EPA inspector general's office, a copy of which was obtained late Tuesday by The Associated Press, concludes "the allegations were not substantiated, criminal prosecution was declined, and thus, no further investigation is warranted in this matter."

Investigators from the EPA and the Justice Department spent seven months looking into claims by former EPA ombudsman Robert Martin and his senior aide, Hugh Kaufman, that Whitman had a personal financial interest influencing decisions at the cleanup in New York and two Superfund toxic waste sites, Shattuck Chemical Co. in Denver and Marjol Battery and Equipment Co. in Throop, Pa.

Martin and Kaufman had alleged that Whitman crafted deals benefitting Citigroup, which had a financial interest in the cleanup projects. Whitman's husband, John, worked for Citigroup and had stock holdings in the company.

. . .

[EPA Inspector General Finds No Improper Dealings by Whitman in World Trade Center, Superfund Cleanups, JOHN HEILPRIN, Associated Press Writer, Tuesday, July 16, 2002, Associated Press]

3/11/02

Kaufman said Whitman falsely assured New Yorkers that the air around the World Trade Center was safe in the days after the structures were leveled by the Sept. 11 attacks. That, he said, saved Travelers Insurance, owned by Citigroup, millions of dollars. And he said Whitman tried to dissolve the EPA national ombudsman's office, where he works, so it wouldn't interfere with a court settlement with Citigroup about Shattuck.

In both cases, Kaufman said, Whitman was motivated by her family financial ties to Citigroup Inc., which were first reported last year by The Denver Post. Whitman's husband, John, worked for Citigroup from 1972 to 1987, and still has company stock valued at as much as $250,000. He is now managing partner of Sycamore Ventures, a venture capital firm spun off from and backed by Citigroup.

"If Mrs. Whitman successfully dissolves the national ombudsman position, Citigroup could save hundreds of millions of dollars," Kaufman wrote in a letter to the Justice Department.
. . .
EPA officials said Whitman had no involvement in Shattuck decisions since the settlement was all but finalized while she was still the governor of New Jersey.
. . .
[EPA leader's rulings on Citigroup probed, By Mike Soraghan, Denver Post Washington Bureau, Monday, March 11, 2002]

3/9/02
The Environmental Protection Agency will investigate whether its highest official was influenced by personal business interests when she declared the air in lower Manhattan safe to breathe soon after the World Trade Center disaster. The EPA Office of the Inspector General will try to determine whether EPA Administrator Christine Todd Whitman's statements that the air was safe constitute a conflict of interest, since she has considerable financial ties to the insurance industry, which compensates companies for absent workers. The investigation was prompted by allegations from the EPA Ombudsman's office. Chief Investigator Hugh B. Kaufman maintains that Whitman acted improperly in not recusing herself from determinations about the possible health consequences of breathing the air in lower Manhattan after Sept. 11.

By declaring the air safe in the days and weeks after the terrorist attacks, he alleges, she significantly reduced insurance industry liability. She and her husband were in a position to benefit personally from such a limit on insurance company liability.
. . .
This is not the first time the office of the Ombudsman has accused Whitman of improperly using her office to benefit the insurance companies in which she and her husband, John Whitman, reportedly hold $100,000 to $250,000 in stock. According to an article in Salon.com, Mr. Whitman worked for Citigroup from 1972 to 1987, and now is a managing partner in Sycamore Ventures, a venture capital firm that has its origins in Citicorp Ventures, Ltd. Citigroup is a primary investor in Sycamore Ventures.
The article outlines EPA Ombudsman Robert J. Martin's charges that Whitman sought to punish Martin after he challenged a cleanup settlement with Citigroup that severely limited Citigroup's liability for the property, which it owned.
. . .
[EPA to investigate air quality ruling following WTC disaster At issue is whether Christine Todd Whitman was influenced by personal business interests when she declared the air was safe to breathe, 3/9/02, By DIANA YATES and HEIDI SINGER, Staten Island Advance]

1/16/02

The Environmental Protection Agency's ombudsman, Robert Martin, and his chief investigator, Hugh Kaufman, are trying to sell a very scary story these days. They are, with some success, attempting to convince news outlets that a four-cornered conspiracy exists to harm the nation's environment. According to Martin and Kaufman, there is a sinister connection between the following facts:

EPA Director Christie Todd Whitman has proposed moving the ombudsman functions to the Office of Inspector General. Whitman's husband owns stock in Citigroup, a major banking and financial firm. Citigroup has negotiated a $7.2 million settlement with the EPA to pay part of the cost of the second Shattuck Chemical Co. Superfund cleanup in Denver.

The second cleanup, the shipment of low-level radioactive wastes out of state, will actually cost considerably more than $7.2 million.

What this means, therefore, is that Whitman made a sweetheart deal with Citigroup to maximize the investments of her husband. This preposterous story has already appeared in a number of media outlets, including the Washington Times and salon.com.

The problem with this yarn is that it ignores a number of very important facts in order to fluff up the reputations of both Martin and Kaufman.

Here are a few of those facts: The proposed reorganization of the ombudsman's office predates Whitman. Carol Browner, the former director, and her Superfund director, Tim Fields, had both found fault with Martin and Kaufman. Fields, in fact, directly accused Martin of unprofessional behavior. Regionalization of the ombudsman's office was advocated in the Clinton administration.

The settlement that included the $7.2 million payment by Citigroup was actually negotiated in the latter part of 2000. Not only was that before Whitman was even selected to be EPA director, it was before George W. Bush was even declared president-elect. It is inconceivable that a stock holding by Whitman's husband in Citigroup could have been a factor in the outcome. What was a factor was that Citigroup interest in the property was recent, and a question exists on whether or not it is liable for any costs of the new remedy. Shattuck Chemical had paid something like $30 million to finance the first EPA remedy, and there is no basis in the federal law to go back and require it to pay the same or an even larger amount for a second remedy, specifically the out-of-state transport of the same wastes.

Martin and Kaufman know quite well when the settlement was completed, but for reasons that have to do with their current self-interest, they continue to insist that there is something fishy about the stock holdings of Whitman's husband and Whitman's own desire to relocate the ombudsman's functions.

. . .

[Al Knight, The EPA farce rolls on, By Al Knight, Denver Post Columnist, Wednesday, 1/16/02]

3/6/02
A federal environmental official said New York City school chancellor Harold Levy cited conflict of interest accusations, and said he should not have been involved in the decisions to re-open ground zero schools.

The reason, according to Hugh Kaufman who is a veteran staffer with the Environmental Protection Agency, is that Levy's former employer, Citigroup owns Travelers' Web site Insurance, and the company has lost about $500 million tied to insurance claims related to Sept. 11. Kaufman asserts that Traveler's would benefit from the perception that things were back to normal in lower Manhattan, and that the re-opening of the schools contributes to that perception.

"He owns stock in Citigroup, and Citigroup has a financial interest in having everyone think everything is safe and getting people down into that area," Kaufman said. Levy took the chancellor's job in January of 2000. But according to his financial disclosure statement, he has a minimum of $770,000 dollars of investments Citigroup -- and perhaps as much as $2.3 million dollars.

Levy would not appear on camera but issued a statement that said: "To remove all doubt, I have asked my counsel to refer the matter to the city's conflicts of interest board, and will be guided by its decision."

The chancellor insists his decision to return children to their schools was based on advice he received from the department of health, and other experts. Based on that advice, Levy concluded there were no serious health risks.

Levy also said he had no knowledge of any policies underwritten by any insurance company at the World Trade Center. An ethics expert says the accusation does not make sense. "I think it's a silly accusation," said Steven Cohen, an ethics expert from Columbia University. "I don't think the chancellor would in any way put children in danger because of a conflict of interest."

Other officials at the EPA claim Levy is the victim of a bureaucratic power struggle the agency is having with Kaufman and the ombudsman's office, which acts as an internal watchdog.
. . .
[Was Levy Motivated By Money? Official Believes NYC School Chancellor Opened Up Lower, Manhattan Schools Too Early, 3/6/02, www.wnbc.com]

EPA IG investigation of alleged Whitman conflicts of interest

There was another EPA IG investigation specifically addressing the accusations of Kaufman and Martin. The report from this investigation, quoted below, states that Governor Whitman held many investments in addition to Citicorp, and did not know about Citicorp, nor participate substantially in the decisions in question.

Former EPA Ombudsman ROBERT MARTIN and EPA employee HUGH KAUFMAN alleged, on or about January 14, 2002, in published news media accounts, that

Administrator WHITMAN had improperly participated in decisions affecting her personal financial interests arising from her husband's stock holdings in CITIGROUP Inc. (CITIGROUP). Specifically, with respect to the SHATTUCK Superfund Site and the MARJOL Superfund Site, MARTIN and KAUFMAN alleged, in substance, that Administrator WHITMAN participated in either remedy-selection decisions or settlement negotiation decisions that affected the liability of CITIGROUP. For the WTC Site, they alleged Administrator WHITMAN made misleading statements about the results of air monitoring tests conducted at the WTC Site and that such statements accrued to the benefit of TRAVELERS INSURANCE CORPORATION, a company owned by CITIGROUP, which allegedly faces liability relating to the terrorist attack on the WTC.

.. . . .

WOLGAST stated that she, ROBERT FABRICANT, EPA General Counsel, and WERNICK talked about preparing a recusal for the Administrator for CITIGROUP after the Denver Post article [regarding the Administrator's alleged conflict of interest with the SHATTUCK Superfund Site and CITIGROUP] was released. However, they determined that there was no need to prepare a recusal because FABRICANT verified that the Administrator had not participated in matters involving CITIGROUP or SHATTUCK, and he advised the Administrator not to participate in any matter involving CITIGROUP or SHATTUCK. WOLGAST stated that she consulted with NORMAN SMITH, Office of Government Ethics (OGE) and they (OGC and OGE) agreed not to do an entity-by-entity recusal because the Administrator had a large number of investments and a recusal had already been prepared for companies that had significant dealings with EPA. (Exhibit 2)

. . .

She identified those companies that she knew about at the time. WOLGAST stated that as of January 2001, she did not know about CITIGROUP. (Exhibit 3)

. . .

On March 18, 2002, CHRISTINE TODD WHITMAN, EPA Administrator, was interviewed and stated that she became aware of her alleged conflict of interest from press reports. Administrator WHITMAN stated that she does not have a financial conflict of interest pertaining to CITIGROUP or any other company. She stated that she has divested all financial interests except her husband's business. The Administrator stated that she does not get involved in anything that would constitute a conflict of interest and she has recused herself from all such matters. Administrator WHITMAN stated that she was not informed about the settlement negotiations or the final resolutions of the SHATTUCK Superfund Site. However, JACK MCGRAW, Acting Regional Administrator, Region 8, briefed her about SHATTUCK, but only to the extent that it was identified to her as a Superfund site. She was also advised by the Ombudsman's office of some issues concerning SHATTUCK. Administrator WHITMAN stated that she has not participated in or taken any action pertaining to SHATTUCK; she had no involvement in the resolution of the site; she does not remember receiving any details or briefing papers regarding SHATTUCK prior to her visit to the regional office; and she did not direct anyone to take any action pertaining to SHATTUCK. (Exhibit 18)

. . .

[OFFICE OF THE INSPECTOR GENERAL OFFICE OF INVESTIGATIONS REPORT OF INVESTIGATION CONCERNING CHRISTINE TODD WHITMAN Administrator for the U.S. Environmental Protection Agency Case Number: 2002-0003 http://www.epa.gov/oigearth/ereading_room/ROIUNREDACTED.pdf]

Citicorp stock ownership common

As a personal observation, Citicorp is very large; they had $88.4 billion in earnings for the year 2001, and around 300,000 employees. Ownership of stock is probably very common in many diversified portfolios a person may not be aware that they own it. Any government employee who invests in the Thrift Savings Plan and specifies the "C Fund" (which is very common) also owns Citicorp stock.

J: AIR TESTING AND STANDARDS FOR ASBESTOS

"Did people receive enough information about air quality? . . . some missed subtleties of EPA's intended message . . .

"The AHERA 'standard' used to conclude that asbestos levels were safe is not a health-based standard. AHERA standard based on minimum detection limit that used old filters (70 structures/mm^2);[42] new filters capable of achieving lower detection limits of approx. 15 s/cc." *[1/27/03 EPA IG report]*

AHERA clearance test not a safe level or benchmark – EPA IG report correct

The following statement was in the EPA IG report of 1/27/03:

> The AHERA "standard" used to conclude that asbestos levels were safe is not a health-based standard. AHERA standard based on minimum detection limit that used old filters (70 structures/cc);[43] new filters capable of achieving lower detection limits of approx. 15 s/cc. . . . *[1/27/03 EPA IG report]*

EPA's Office of Research and Development made the same statement in their 10/02 draft risk assessment for the WTC:

> The principal benchmark used in this assessment for evaluation of asbestos in air data from the WTC site is the Asbestos Hazard Emergency Response Action (AHERA) standard of 70 S/mm^2. . . . It should be noted that this standard is not health based, but rather technology based. It is also noted that the technology has improved since 1987, such that current filters often have much less than 17.5 S/mm^2, sometimes close to 0 S/mm^2. Therefore, 70 S/mm^2 would be much higher than blanks and represents more than just a statistical elevation above background. above. Finally it is noted that while the AHERA standard was originally intended as an indoor 'clearance' standard, it is being used to evaluate outdoor exposures in this assessment.
> . . .
> *[Exposure and Human Health Evaluation of Airborne Pollution from the World Trade Center Disaster, External Review Draft, 10/02, National Center for Environmental Assessment, Office of Research and Development, EPA, Publication Nos. NCEA - W - 1395, or EPA/600/P-2/002A, http://www.epa.gov/ncea or http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=36387]*

EPA and NYC claims that AHERA 70 s/mm^2 level is a health standard

The following are official statements both by EPA and the NYC Departments of Environmental Protection and Health claiming that the AHERA level of 70 structures per square millimeter (70

s/mm^2) is a safety standard, a health benchmark, and a level at which no long term health effects will occur:

> 10/1/01 [approximate date]
> Benchmarks, Standards and Guidelines Established to Protect Public Health
>
> Since September 11, the U.S. Environmental Protection Agency (EPA) and other federal agencies have been taking samples of the air, dust, water, river sediments and drinking water from the World Trade Center site and surrounding areas in Manhattan, Brooklyn, Staten Island and New Jersey. EPA and other agencies have analyzed these samples for the presence of pollutants that might pose a health risk to response workers and the public. The samples are evaluated against a variety of benchmarks, standards and guidelines established to protect public health under various conditions. EPA considers the amount of time a person is exposed to a particular pollutant and where a school, workplace or home i n creating these criteria.
>
> The following is a description of some of the benchmarks, standards and guidelines EPA is using to evaluate environmental conditions in the aftermath of the World Trade Center disaster.
>
> ASBESTOS . . . In the Air
>
> In evaluating data from the World Trade Center and the surrounding areas, EPA is using a protective standard under AHERA, the Asbestos Hazard Emergency Response Act, to evaluate the risk from asbestos in the outdoor and indoor air. This is a very stringent standard that is used to determine whether children may re-enter a school building after asbestos has been removed or abated. It is based on assumptions of long-term exposure. EPA has chosen to use this standard, because it is the most stringent and protective, even though it is unlikely that the public will be exposed to asbestos from the World Trade Center site for extended periods of time.
> . . .
> *[EPA website responding to WTC disaster, guidance on standards, approximate date 1-/1/01, http://www.epa.gov/epahome/wtc/activities.htm]*
>
> _____
>
> 10/3/01
> Asbestos Monitoring Data Ambient Air Samples:
> OSHA has analyzed 67 air samples in the area where crews are actively working on the World Trade Center Site. None of these samples exceeded OSHA's permissible exposure limit of 0.1 f/cc as an 8-hour time-weighted average. EPA has collected and analyzed a total of 442 air samples for asbestos from its 16 fixed air monitoring stations, which are located in the area surrounding the World Trade Center site.
>
> Only 27 were above 70 structures per millimeter squared, the AHERA standard, which is based upon assumptions of long-term exposure. ("AHERA" is the Asbestos Hazard Emergency Response Act, which is used to determine whether children may re-enter a school building after an asbestos removal or abatement.)
> . . .
> *[10/03/2001 EPA AND OSHA WEB SITES PROVIDE ENVIRONMENTAL MONITORING*

DATA FROM WORLD TRADE CENTER AND SURROUNDING AREAS, EPA headquarters press release, 10/3/01, www.epa.gov]

11/1/01

The standards or tolerance levels that are being used are very conservative. For example, for asbestos, we are using the standard that is used for indoor air quality for reentry into a school after asbestos removal, which is the most stringent standard, as the tolerance level or standard for outdoor air quality in the residential areas. **. . .** Moreover, these standards have been designed to include many safety factors so that acceptable levels of exposure are far below the levels at which health effects are expected to occur.

[Jessica Leighton, Ph.D., Assistant Commissioner, Environmental Risk Assessment, NYC DOH, Before the NYC Committee on Environmental Protection, 11/1/01]

11/26/01

Now I'd like to turn to some of our other findings. We have found asbestos in some of our air and dust samples at ground zero and the surrounding area. Some of the dust samples show levels above the one percent used to indicate that a material is asbestos-containing. To date, out of more than 2,000 air samples taken at about 20 fixed air monitoring stations in and around the site, only about 30 have had levels of asbestos that exceed the Asbestos Hazard Emergency Response Act of AHERA standard, we use to determine if children can re-enter a school building after asbestos has been removed or abated. It is a stringent and protective standard. With one exception on October 9, the last time we recorded a level above the school re-entry standard was September 30.
. . .
[Testimony of Kathleen Callahan, Acting Deputy Regional Administrator U.S. Environmental Protection Agency, Before the New York State Assembly, 11/26/01] [44]

9/18/01

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 . . . I am glad to reassure the people of New York and Washington, D.C. that their air is safe to breathe and their water is safe to drink". **. . .** 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.
. . .
[Headquarters Press Release, Washington, DC For Release 09/18/2001 WHITMAN DETAILS ONGOING AGENCY HEFFORTS TO MONITOR DISASTER SITES, CONTRIBUTE TO CLEANUP EFFORTS, www.epa.gov]

9/21/01

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. Only seven samples taken at or near ground zero have had marginally higher levels of asbestos that exceed EPA's level of concern for long-term exposure [AHERA level].

. . .

[Headquarters Press Release, Washington, DC, 09/21/2001, EPA DISASTER RESPONSE UPDATE NYC MONITORING EFFORTS CONTINUE TO SHOW SAFE DRINKING WATER, AIR, www.epa.gov]

10/3/01

[N]o evidence of any significant public health hazard to residents, visitors or workers beyond the immediate World Trade Center area.

. . .

EPA has collected and analyzed a total of 442 air samples for asbestos from its 16 fixed air monitoring stations, which are located in the area surrounding the World Trade Center site. Only 27 were above 70 structures per millimeter squared, the AHERA standard, which is based upon assumptions of long-term exposure. ("AHERA" is the Asbestos Hazard Emergency Response Act, which is used to determine whether children may re-enter a school building after an asbestos removal or abatement.)

. . .

[Headquarters Press Release, Washington, DC, For Release 10/03/2001, EPA AND OSHA WEB SITES PROVIDE ENVIRONMENTAL MONITORING DATA FROM WORLD TRADE CENTER AND SURROUNDING AREAS, www.epa.gov]

11/1/01

[T]he vast majority of our tests find levels of these contaminants that pose no significant long-term health risks to residents, business employees and visitors beyond ground zero. And despite recent press accounts which suggest otherwise, these findings have not changed.

. . .

To date, out of more than 1300 air samples taken at about 20 fixed air monitoring stations in and around the site, only 30 have had levels of asbestos that exceed the Asbestos Hazard Emergency Response Act or AHERA standard, we use to determine if children can re-enter a school building after asbestos has been removed or abated. It is a stringent and protective standard . With one exception on October 9, the last time we recorded a level above the school re-entry standard was September 30.

. . .

[Statement of Kathleen Callahan, Acting Deputy Regional Administrator, Region 2, Before the New York City Council Environmental Protection Committee, 11/1/01, http://www.epa.gov/region02/news/speeches/011101k.htm]

2/11/02

TEM results are compared to the clearance/re-occupancy standard for indoor air in schools after an asbestos abatement project. This standard is 70 structures of asbestos

per square millimeter. The standard was established pursuant to the federal "Asbestos Hazard and Emergency Response Act", usually known as AHERA.

. . .

[Testimony of Thomas R. Fireden, M.D., M.P.H., Commissioner, New York City Department of Health and Joel A. Miele Sr., P.E., Commissioner, New York City Department of Environmental Protection before the U.S. Senate Committee on Environment and Public Works, Subcommittee on Clean Air, Wetlands, and Climate Change, 2/11/02, http://www.ci.nyc.ny.us/html/doh/html/public/testi/testiair.html]

5/31/02

Analysis of the majority of samples from monitoring sites at or around Ground Zero has not shown detectable levels of asbestos or has found levels well below the standard that EPA is applying one that is normal ly used to determine whether children may re-enter a school building after asbestos has been removed or abated. No lower Manhattan samples have been above this level since April 2, when a sample taken from the worker wash tent at which workers remove dust from their boots and clothing slightly exceeded the standard. Since September 11, only 21 out of nearly 9500 samples taken have exceeded the school-based standard *[AHERA standard]*.

. . .

[EPA SHIFTS FOCUS TO INDOOR AIR, 5/31/02, http://www.epa.gov/region02/news/2002/02052.htm]

Earlier press coverage/documentation, AHERA 70 s/mm^2 level unsafe, not benchmark

The following are excerpts of press stories and memoranda I prepared documenting that the AHERA TEM clearance level is not a safety standard, but only a detection limit. I called attention to this fact as early s 12/19/01, in a memorandum which was widely distributed to EPA officials, including those responsible for the WTC cleanup. These memoranda also received press coverage, and thus EPA officials would have been made aware by that route as well. In addition, my memoranda were posted on several web sites, two of which are listed in Appendix 3 of this report.

2/12/02

Cate Jenkins, a research chemist at the US Environmental Protection Agency, has accused New York City's Health Department of "giving the public a false sense of security" by grossly exaggerating the amount of airborne asbestos that can be considered safe. She made the charge in an internal memo dated Sunday.

. . .

At a congressional hearing in Lower Manhattan yesterday on air quality around the site, several doctors reported a high incidence of serious respiratory ailments suffered not only by firefighters, rescue crew members, and cleanup workers, but also by office workers several blocks downwind.

. . .

Jane M. Kenny, EPA's regional administrator, defended the agency. "We used the most

extensive testing ever," she said. "There was a lot of confusion about what exactly was safe, and was not. ... The people in public service were doing the best they could."
. . .
[Concerns intensify on ground zero dustBy Fred Kaplan, Boston Globe, 2/12/2002]

3/21/02
Jenkins also charges the EPA misused the 70-fiber federal test. It is meant to clear public schools for reentry after an asbestos cleanup, but it was applied to outdoor air tests collected under very different test conditions.

"We didn't have a standard in air for a collapse of this type," Mears said. "The 70 fibers is a conservative estimate our risk assessors used."
. . .
[A Red Flag on Air Tests at WTC, By Juan Gonzalez, Daily News, 3/21/02]

12/19/01
After the disaster, the federal EPA declared that it was applying the most stringent standard, namely the 70 asbestos structures per millimeter of air in the Asbestos Hazard Emergency Response Act (AHERA). This "70" level is the lowest level that can be detected in air using the AHERA test method, because of the background level of asbestos in the filter through which the air is drawn. In other words, the level EPA stated that it required was NO detectable asbestos, not 1% or lower. . . . *[Jenkins, 12/19/01]*
. . .
The "70 structures or less" AHERA clearance standard for air

In the World Trade Center disaster, EPA has said that it is using the level of 70 or fewer asbestos structures/square millimeter standard required by the Asbestos Hazard Emergency Response Act (AHERA). This 70 or fewer structures does not correspond to any level found to be related to health effects. Instead, it is the equivalent to detecting 4 structures in 10 TEM grid openings in a filter through which air has been drawn.
. . .
The filters used to collect the asbestos in air are always contaminated with low levels of asbestos. The fibers found as background on the filter were present without any air being drawn through the filter. Thus, this 70 structures/square millimeter corresponds roughly to a general laboratory method background level of 0.02 structures/milliliter. . . .
[Jenkins, 12/19/02]

1/11/02
EPA is using this AHERA TEM clearance test and claiming that if it shows 70 or fewer asbestos structures per square millimeter, then the air is safe.
. . .
This statement by EPA is false and a gross misrepresentation of the AHERA regulations which do not in any way claim that a simple air test alone showing 70 or fewer structures per square millimeter can be used directly to determine if air is safe. . . . The first, and fatal problem in using the AHERA TEM test is that it is quite insensitive. It cannot detect

airborne asbestos at levels that are shown to cause excessive cancers. . . . EPA is conducting the AHERA TEM clearance test under passive conditions when the dusts are not being disturbed. . . . any activities which stir up dusts will result in vastly higher airborne asbestos concentrations.

. . .

By even performing the AHERA TEM clearance test in lieu of professional asbestos abatement, EPA is violating the AHERA regulations. This is because the AHERA TEM clearance test is only allowed in conjunction with a whole range of asbestos abatement procedures that go on prior to even taking the test. It was designed to catch only gross contamination problems caused by some worker on the asbestos abatement project, such as emptying one bag of asbestos contaminated material into another inside a room that had previously been carefully abated. . . . *[Jenkins, 1/11/02]*

2/10/02

The reason that the EPA designed the AHERA TEM clearance test, requiring first certified asbestos abatement procedures followed by a leaf blower, and then a fan, followed by air testing to the 0.01 f/mL (PCM) level (equivalent to 0.02 s/mL or 70 structures per square millimeter) was to save costs and time. EPA found that using a leaf blower increased asbestos concentrations in air by thousands of times. One study showed that using a leaf blower increased airborne asbestos concentrations over 100 times that caused by even vigorous broom cleaning. And vigorous broom cleaning has been demonstrated to increase asbestos levels hundreds or thousands of times over that of passive conditions which do not disturb dusts. Testing at the low levels that are actually those of health concern, 0.000004 f/mL, can often take 24 or more hours, which was found to be impractical for asbestos abatement contractors.

Even if testing is done at the low levels associated with asbestos health effects (0.000004 f/mL), there must be human activities or simulated human activities in the same room at the same time of the testing. When testing airborne asbestos levels inside homes in Libby, Montana, the Superfund site, EPA had both stationary air monitors and monitors worn by residents going about their normal daily activities. See the attached risk assessment for the Libby site for a description. Another study showed that asbestos concentrations in air can be undetectable or below 0.005 f/mL when there are no activities in the room to stir up dusts, but as high as 0.09 to 54 f/mL when activities such as vacuuming, broom sweeping, gym activities, etc. are going on in the room to disturb the dusts.

. . .

The EPA standard for asbestos in indoor and outdoor air is found in its Integrated Risk Management Information System (IRIS), attached, and other public documents. It is the policy and goal of EPA to protect at the 1 in a million cancer risk level (10^{-6} risk level), the point of departure. In all cases, action by EPA is triggered by any risk greater than 1 in 10,000. The EPA air standards for asbestos in inside and outside air at the different risk levels are given in the table below:

CANCER RISK LEVEL		AIR CONCENTRATION OF ASBESTOS
number of cancers	risk level	fibers per milliliter (f/mL), "PLM" fraction of fibers over 5 micrometers long
1 in 1,000,000	10^{-6} (= E-6)	0.000004 f/mL (= 4E-6 f/mL)

1 in 100,000	10^{-5} (= E-5)	0.00004 f/mL (= 4E-5 f/mL)
1 in 10,000	10^{-4} (= E-4)	0.0004 f/mL (= 4E-4 f/mL)

. . .
It is particularly important to test asbestos at the 10^{-6} risk level, because other carcinogens and possible carcinogens are potentially present in WTC fallout, including fiberglass, dioxins, PCB's, and heavy metals. If several are present, the carcinogenic risk could be additive and result in a higher aggregate cancer risk. . . . *[Jenkins, 2/10/02]*

3/11/02

70 s/mm^2 is not the AHERA standard, as explained in the AHERA regulations themselves

It is a LABORA TORY BACKGROUND, the same as a DETECTION LIMIT or lab SENSITIVITY
A "LABORAT ORY BACKGROUND" is like going to a salad bar with a container for the salad.
The scale at the cashiers is good for weighi ng the large amount of salad, because the weight of the container is relatively small.
But if you went to the cashiers with an empty container and asked that it be weighed for traces of cyanide, you would be out of luck, since the cyanide would weigh much less than the container.
The container for the salad is like a "LABORATORY BACKGROUND"

In their naivete of analytical testing methods, Region 2 is under the mistaken belief that 70 s/mm^2 is the natural, typical background level of asbestos in normal air. Region 2 states this explicitly, seen in the excerpts in the preceding section.

EPA Region 2 has unfortunately completely misinterpreted the regulations at Title 40 of the Code of Federal Regulations, which describe in detail the meaning of the 70 s/mm^2 level for the AHERA TEM clearance test.

It is only the detection limit of a particular air test for asbestos, or the sensitivity of the method, a LABORATORY BACKGROUND. The word "background" refers to the fact that one particular filter material through which air is drawn is already contaminated with asbestos.
. . .
Extensive excerpts are given of the AHERA regulations, which make it very clear that 70 s/mm^2 only refers to the detection limit or sensitivity or laboratory background of the AHERA TEM clearance test. Nowhere in the AHERA regulations is the word "standard" or "safe" used in conjunction with 70 s/m^2. In fact, in the next section, it can be seen that the same AHERA regulations state that there is NO safe exposure to asbestos.
. . .
The actual AHERA standard for asbestos in air is ZERO

The AHERA regulations explicitly state:
"there are no safe exposures to asbestos"

The AHERA regulations actually do give a standard for asbestos in air, namely ZERO. The AHERA regulations are explicit, saying there are no safe exposures to asbestos:

> 40 CFR § 763. Appendix B to Subpart E to Part 763 -- Asbestos Model Accreditation Plan
> . . .
> 1. WORKERS [*same language included for supervisors and all others involved in abatement*] . . .
> . . .
> (b) Potential health effects related to asbestos exposure. The nature of asbestos-related diseases; routes of exposure; dose-response relationships and the lack of a safe exposure level; the synergistic effect between cigarette smoking and asbestos exposure; the latency periods for asbestos-related diseases; a discussion of the relationship of asbestos exposure to asbestosis, lung cancer, mesothelioma, and cancers of other organs. [*emphasis added*]
> . . .
> Asbestos School Hazard Detection and Control Act
> . . .
> § 3601. Congressional statement of findings and purposes (a) The Congress finds that-- (1) exposure to asbestos fibers has been identified over a long period of time and by reputable medical and scientific evidence as significantly increasing the incidence of cancer and other severe or fatal diseases, such as asbestosis; (2) medical evidence has suggested that children may be particularly vulnerable to environmentally induced cancers; (3) medical science has not established any minimum level of exposure to asbestos fibers which is considered to be safe to individuals exposed to the fibers . . . [*emphasis added*]

. . .

Even EPA Region 2 agrees that there are no ambient air standards for asbestos. Walter Mugdan, Regional Counsel, stated:

> EPA has not promulgated an outdoor ambient air quality standard for asbestos; nor has any other regulatory agency done so, for that matter.
> [*Mugdan, Walter E., Esq. (January 25, 2002) Environmental law issues raised by terrorist events in 2001. Speech before the NY Bar Association. Posted at www.NYenviroLAW.org*]

. . .

70 s/mm^2 AHERA is 2375 to 4750 tim es higher than EPA's 10 $^{-6}$ risk level

The table below compares the AHERA 70 structures per square millimeter (70 s/mm^2) level with the EPA one-in-a-million risk level (10^{-6} risk level; ten to the minus six risk level).

Since the EPA one-in-a-million cancer risk level for asbestos is 0.000004 fibers per milliliter (PCM), the AHERA level is 2375 to 4750 times higher than the EPA cancer risk level. In other words, the 70 s/mm^2 level would lead to 2.4 to 4.8 excess cancers per one thousand. This is unacceptable.

The 70 s/mm^2 level is converted to "PCM equivalents" to make this comparison possible. See section above for an explanation of PCM equivalents. The theoretical level of PCM equivalents for 70 s/mm^2 is given in the AHERA regulations at 40 CFR § 763 App. A. The Region 2 air monitoring data also gives real-world PCM-equivalents to

70 s/mm^2. For Manhattan asbestos air tests, the PCM equivalents range from 0.0095 to 0.019 f/mL (PCM). . . . *[Jenkins, 3/11/02]*

EPA 110 Liberty St. study shows air fails 10 $^{-4}$ risk level, but not AHERA level

The EPA 110 Liberty St. study shows that the AHERA TEM clearancelevel of 70 s/mm^2 is easier to achieve than EPA's WTC criterion of 0.0009 f/cc PCMe (the 10^{-4} risk level for a 30 year exposure). In other words, even for the finely divided WTC dust, the AHERA TEM clearance level represents higher levels of airborne asbestos than the EPA WTC criterion of 0.0009 f/cc.

There have been claims that the asbestos from the WTC was so finely pulverized that there would not be any significant fraction of fibers longer than 5 µm, and exposures to WTC asbestos are harmless. This would mean that the AHERA level would still be under the 0.0009 f/cc PCMe level. The new EPA study disproves this theory.

See Section G on the 110 Liberty St. study for more information. After rigorous EPA abatement, air levels were either "at" or above the EPA criterion of 0.0009 S/cc PCMe, but below the AHERA TEM level of 0.0022 s/cc, for 4 apartments and one store.

AHERA 70 s/mm^2 is higher than background or typical levels

The AHERA level of 70 s/mm^2 is the equivalent of 0.022 structures (TEM) per cubic centimeter (s/cc^2, or also s/mL), assuming that the standard volume of air is drawn during testing.[45]

This level is far higher than outdoor ambient background levels in urban cities, and is also much higher than found indoors, even in buildings with asbestos containing building materials. The EPA regulations and statutes state that in any cleanup, background levels or even zero exposures are the goal.[46]

My 6/9/02 memorandum contained the following memorandum summarizing background levels of asbestos in air from the ATSDR Toxicological Profile for Asbestos. The table also included the AHERA clearance level of 70 s/mm^2 (same as 0.002 s/mL), and stated that this was an unsafe level.

ATSDR AIR LEVEL FINDINGS COMPARED TO LEVEL CHOSEN BY REGION 1 Background ambient air levels are from studies determined to be the most credible by the ATSDR[47]				
	Concentration in TEM structures per milliliter (s/mL). This includes all asbestos fibers and bundles of fibers, and so is higher than "PCM" fibers.		Equivalent concentration in PCM fibers per milliliter (PCM f/mL). PCM fibers are only those single fibers which are longer than 5 micrometers with a certain aspect ratio.	
		expressed as exponential		expressed as exponential
ATSDR finding: outside air, rural, no known source of asbestos contamination nearby	0.00001	(1×10^{-5})	0.0000002	(2×10^{-7})
ATSDR finding: outside air, urban, no know source of asbestos contamination nearby	0.0001	(1×10^{-4})	0.000002	(2×10^{-6})
ATSDR finding: 1988 EPA survey of 94 public buildings containing asbestos materials, mean concentration	0.006	(6×10^{-3})	0.0001	(1×10^{-4})
ATSDR finding: 1988 EPA survey of 41 schools containing asbestos materials, mean concentration	0.03	(3×10^{-2})	0.005	(5×10^{-4})
AHERA TEM clearance test level, the "70 structures per square centimeter" level, converted to s/mL and PCM equivalent f/mL. This is an unsafe level for long term exposures.[48]	0.02	(2×10^{-2})	0.01 approximately	(1×10^{-2})

EPA ORD validates again ATSDR findings of background asbestos air levels

In its 10/02 draft, EPA's ORD also recapitulates the same findings of the ATSDR, namely that the AHERA 70 s/mm^2 level is much higher than background:

> ATSDR's Toxicological Profile for Asbestos (ATSDR, 1999) provides a summary of background asbestos levels.
>
> . . .
>
> Data from several studies indicate that in urban areas, most ambient air concentrations range from $3*10^{-6}$ to $3*10^{-4}$ PCM f/cc, but they may range up to $3*10^{-3}$ PCM f/cc as a result of local sources. In another investigation, the median concentration in U.S. cities has been estimated to be $7*10^{-5}$ PCM f/cc.
>
> A recent analysis of monitoring data for asbestos in ambient air worldwide estimated rural and urban levels at about $1*10^{-5}$ TEM f/cc ($2*10^{-7}$ PCM f/cc) and $1*10^{-4}$ TEM f/cc ($2*10\text{-}^{6}$ PCM f/cc), respectively.
>
> In a review of indoor air monitoring data from a variety of locations, arithmetic mean concentrations ranged from $3*10^{-5}$ to $7*10^{-3}$ PCM f/cc. Levels of asbestos in 94 public buildings that contained asbestos ranged from ND to 0.2 TEM f/cc (ND to $3*10^{-3}$ PCM f/cc), with an arithmetic mean concentration of 0.006 TEM f/cc (10^{-4} PCM f/cc). Analysis of data based on air samples from 198 buildings with asbestos-containing materials

(ACM) indicated mean asbestos levels ranging from $4*10^{-5}$ to $2.43*10^{-3}$ TEM f/cc ($7*10^{-7}$ to $4*10^{-5}$ PCM f/cc).

Asbestos concentrations in 41 schools that contained asbestos ranged from ND to 0.1 TEM f/cc (ND to $2*10^{-3}$ PCM f/cc), with an arithmetic mean of 0.03 TEM f/cc ($5*10^{-4}$ PCM f/cc). Another study reported average concentrations of airborne asbestos fibers > 5 µm in length of $8*10^{-5}$ TEM f/cc and $2.2*10^{-4}$ TEM f/cc in 43 non-school buildings and 73 school buildings, respectively (the 60:1 conversion factors would not apply to these data, since the TEM readings were already on fibers >5 µm in width, so they are likely to be more directly comparable to PCM results). In another study in 71 U.S. schools, the mean, the 95 percentile, and the maximum asbestos levels were $1.7*10^{-4}$, $1.4*10^{-3}$, and $2.3*10^{-3}$ PCM f/cc, respectively.

A study of 49 buildings in the United States reported mean asbestos fiber levels of $9.9*10^{-4}$ PCM f/cc in buildings with no ACM, $5.9*10^{-4}$ PCM f/cc in buildings with ACM in good condition, and $7.3*10^{-4}$ PCM f/cc in buildings with damaged ACM.

In general, concentrations of asbestos in both indoor and outdoor settings and in both rural and urban settings appears to be less than, and by some studies, sometimes substantially less than, $3*10^{-3}$ f/cc on a PCM volumetric basis.

. . .

[Exposure and Human Health Evaluation of Airborne Pollution from the World Trade Center Disaster, External Review Draft, 10/02, National Center for Environmental Assessment, Office of Research and Development, EPA, Publication Nos. NCEA - W - 1395, or EPA/600/P-2/002A, http://www.epa.gov/ncea or http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=36387]

EPA Region 2 believes that the AHERA level is the normal air background level

As documented in my 3/11/02 memorandum, EPA Region 2 believes (believed) that the AHERA level was the background air level:

Region 2 mistakes 70 s/mm^2 as a normal air "background" level

Regional Counsel for EPA's Region 2 explained his belief of the meaning of 70 s/mm^2. He believes that it is a normal air background, and when the AHERA clearance test is run, the results of the test are COMPARED WITH the 70 s/mm^2 "background" level:

> These rules include what is commonly called a clearance test ... The specified AHERA clearance test procedure includes, *inter alia*, a step in which air monitored in the affected space is compared with the specified "background" level of 70 structures per square millimeter (70 s/mm ^{2}).
>
> *[Mugdan, Walter E., Esq. (January 25, 2002) Environmental law issues raised by terrorist events in 2001. Speech before the NY Bar Association. Posted at www.NYenviroLAW.org]*

This is wrong. There is no comparison going on at all with the results of the test and any purported background level of 70 s/mm^2. Instead, the AHERA TEM clearance test

> requires a comparison with the actual background air, which must be done by sampling the air outside and actually testing it, according to the procedures of the AHERA test.
>
> As seen above, the word "background" in the regulations refers to a laboratory background from unavoidable asbestos contamination of the filter through which air is drawn. . . . *[Jenkins, 3/11/02]*

New EPA study of background levels of asbestos in air

During June to September, 2002, EPA conducted a study of background study of asbestos in air in buildings in upper Manhattan to compare to the residential buildings in lower Manhattan below Canal St. The buildings were not chosen randomly or systematically, and EPA even went knocking on doors for participation. There are lists of major asbestos construction sites in NYC. It would have been a simple task for EPA to choose buildings around these asbestos sites. This is the problem with any study that does not use a rigorous protocol to choose study participants, namely intentional selection bias. Thus, we cannot in any way trust EPA;s selection of buildings to establish a background level of airborne asbestos.

As seen below, from the excerpts of the study, EPA would have us believe that buildings in upper Manhattan that were built between 1892 to 1981 have even higher levels of airborne asbestos than EPA's 1 in 10,000 risk level for 30 years exposure of 0.0009 f/cc PCM equivalents. There are other credibility problems with EPA's upper Manhattan background study as well.[49]

> Due to the lack of willing participants on this list, the difficulty with obtaining access, and time constraints under the Inter-Agency Agreements (IAA), EPA initiated cold calling and essentially door to door solicitation in order to solicit volunteers and gain access to buildings for participation in the Study. Therefore, not all of the buildings sampled as part of the Study were obtained from the list provided. Any building willing to participate in the Study was considered for sampling until fourteen buildings were obtained. This is a deviation from the initial sampling plan regarding representation of the diverse housing stock mentioned above. The buildings sampled were constructed roughly between 1892 and 1981.
>
> . . .
>
> Air - There were sixty-two air samples collected, forty-eight in residential spaces and fourteen in common spaces. Each of the samples were analyzed using Phase Contrast Microscopy (PCM), Transmission Electron Microscopy (TEM) AHERA, and TEM Phase Contrast Microscopy equivalents (PCMe) methods. PCM - There was a higher percentage of detections in the common space areas (71%) than in the residential areas (42%) although the minium and maximum detected concentrations were the same. The UCL for the common area (0.0058 f/cc) is slightly more than twice the value for the residential area (0.0023 f/cc).
>
> This difference may not be an unusual occurrence as common areas, such as laundry rooms and hallways may contain more fibrous material, especially in laundry rooms and high traffic areas. Since the common space areas and the residential areas differ, it is recommended to use the 95% UCL for the residential spaces of 0.0023 f/cc as the

background value.

. . .

[WORLD TRADE CENTER BACKGROUND STUDY REPORT INTERIM FINAL, April 2003, Prepared for: United States Federal Emergency Management Agency, IAG No.: EMW-2002-IA-0127, Prepared by: United States Environmental Protection Agency, Region 2, New York City, Response and Recovery Operations, 290 Broadway, New York, NY 10007-1866, http://epa.gov/wtc/bg_report_section1.pdf]

K: 1% ASBESTOS IN SETTLED DUST ALSO IS NOT A HEALTH STANDARD

"EPA considered implementing the NCP but choose not to, even though . . . about 39 percent of bulk dust samples were above the one percent EPA-defined action level for using the NCP." ***[1/27/03 EPA IG report]***

IG is in danger of mistaking the 1% level as a safety standard – 1% is just another detection limit, like the AHERA 70 s/mm^2 level

Although not entirely clear by the wording, the conclusion of the EPA IG report appears to be that 1% asbestos is some type of safety standard. It is not. It is just another detection limit of an outdated method using a light microscope (PLM), just like the AHERA TEM clearance level.

The 1% asbestos level applies only to the original asbestos containing building material (ACBM) itself under the Clean Air Act National Emission Standards for Hazardous Air Pollutants (NESHAP). Any contamination resulting from these building materials would undoubtedly contain much less than 1% asbestos. All of the elaborate cleanup procedures required by EPA apply to the contamination and dusts derived from the original building materials. The CAA NESHAP specifically states that the cleanup must be to BACKGROUND levels, not 1%.

But, EPA claims that the CAA NESHAP does not even apply to the WTC cleanup. They are probably right, because the NCP applies instead. See Section V on the NCP and Section E on the NESHAP.

EPA IG report in error that NCP was not invoked

The EPA IG report was incorrect. The NCP was invoked for the WTC cleanup. Administrator Whitman has testified as such. See the Section V on the NCP.

1% asbestos trigger for NCP is for a *prima facie* case, lower levels also trigger

There is a 1990 guidance memorandum to the regions stating that if the Clean Air Act NESHAP is triggered for a specific, original asbestos-containing material (not necessarily any pollution resulting from this original building material), then this could also be used as a legal basis for an action under the Comprehensive Environmental Response and Liability Act (CERCLA), which includes NCP actions: .

> The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requires notification to the National Response Center immediately following the release of a hazardous substance in an amount that exceeds its reportable quantity. 42 U.S.C. 5 9603. Asbestos is a CERCLA hazardous substance. 42 U.S.C. 5 9601(14): 40 C.F.R.§ 302.4. Accordingly, we encourage regions to review asbestos NESHAP referrals for determination of whether CERCLA causes of action also exist. The purpose of this memorandum is to assist that effort by identifying the elements necessary to establish a CERCLA Section 103(a) claim and providing a legal analysis of relevant statutes and regulations.
>
> . . .
>
> We recommend that CERCLA Section 103(a) violations be alleged when prima facie evidence exists.
>
> . . .
>
> As stated previously, the CERCLA definition of release includes any "dumping, or disposing into the environment" and "the abandonment or discarding of barrels...or other closed receptacles containing hazardous substances...." 42 U.S.C. 5 9601(22). Consequently, particular attention should be paid to cases that allege violations of the asbestos disposal requirements. 40 C.F.R. § 0 61.151(a) and 61.156.
>
> A Section 103(a) claim may be particularly appropriate if the evidence indicates that a) asbestos waste material remained on site after the completion of the demolition in violation of 40 C.F.R. § 0 61.152(a) and 61.156 or b) asbestos waste was transported to or deposited at a location not qualified as an "active waste disposal sitea within the meaning of 40 C.F.R. § 61.156. Assuming, for example, that the waste material weighed at least ten pounds, the reportable quantity is satisfied provided the waste consisted of ten percent friable asbestos.
>
> Moreover, if a large quantity of asbestos was present, there is circumstantial evidence that the release occurred within one twenty-four hour period. Liability may arise even if the asbestos was stored in sealed containers; the definition of release covers the abandonment of receptacles. CERCLA claims should not be limited to cases that involve conduct prohibited by the asbestos NESHAP disposal provisions. Because of the unique circumstances of each referral, the question whether to allege a Section 103(a) violation must be decided on a case-by-case basis. Given the prospect of obtaining significant penalties and further deterring violations,, we encourage adding CERCLA counts when prima facie Section l03(a) evidence exists. Also, we presently recommend a bottom-line settlement figure of $15,000 for each Section 103(a) violation. The proposed figure is consistent with the Clean Air Act Civil Penalty-Policy provision that sets the minimum penalty amount for reporting violations at $15,000. When the CERCLA Section 103 penalty policy becomes effective, regions should calculate settlement penalties in accordance with that guidance.
>
> . . .
>
> *[1nclus.ion of, CERCLA Section 103(a) Counts. in Asbestos NESHAP Case's, [month and day illegible] 1990, From: Michael S. Alushin, Associate Enforcement Counsel for Air, EPA, To: Regional Directors, EPA, www.epa.gov/compliance/resources/policies/civil/caa/stationary/inclu-asbes-rpt.pdf]*

However, this guidance does not in any way preclude actions for asbestos concentrations that are much lower. The 1% would be just a *primae facie* level of proof for a violation or a hazard. The CERCLA (and NCP) regulations are risk-based, and in many cases CERCLA cleanups of

asbestos (such as Libby) are required for much lower concentrations. No set percent of asbestos is given to trigger an action, although the CAA NESHAP regulations are pointed to as being legally defensible without the need for a risk assessment or further proof.

Emergency Planning & Community Right-to-Know Act triggered at 0.1% asbestos

The Emergency Planning & Community Right-to-Know Act (EPCRA) Section 313 requires triggering a community right-to-know notification for a spill of any carcinogen in concentrations over 0.1%. This includes asbestos, an established human carcinogen. This puts into better context the 1% rule for the original asbestos containing material inder the CAA NESHAP (not releases resulting from it).

> 40 CFR §372.38 Exemptions.
> (a) De minimis concentrations of a toxic chemical in a mixture. If a toxic chemical is present in a mixture of chemicals at a covered facility and the toxic chemical is in a concentration in the mixture which is below 1 percent of the mixture, or 0.1 percent of the mixture in the case of a toxic chemical which is a carcinogen as defined in 29 CFR 1910.1200(d)(4), a person is not required to consider the quantity of the toxic chemical present in such mixture when determining whether an applicable threshold has been met under §372.25 or determining the amount of release to be reported under §372.30.
> . . .
> *[http://www.epa.gov/epahome/cfr40.htm]*

If another part of EPA has established that releases of carcinogens like asbestos trigger agency action at much lower levels than 1%, then obviously there is regulatory concern over levels lower than 1% asbestos.

See 40 CFR 372, Toxic Chemical Release Reporting; Community Right-to-Know; Final Rule (February 16, 1988; 53 FR 4500). Also see the following EPA web site for more information on EPCRA:
http://yosemite.epa.gov/oswer/ceppoweb.nsf/content/epcraOverview.htm#fact

EPA claims that 1% is safety standard for asbestos dust

Both EPA and NYC officials repeatedly claimed that 1% or less asbestos in settled dusts was safe and a health-based benchmark:

> <u>9/13/01</u>
> Sampling of ambient air quality found either no asbestos or very low levels of asbestos. Sampling of bulk materials and dust found generally low levels of asbestos.

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.

. . .

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

9/13/01

As rescue efforts continue and the rubble is removed, Environmental Protection Agency officials are finding a new problem in the dust: elevated levels of asbestos. Tuesday night, one sample of dust from the ground at the rescue site contained four and a half times what the EPA worries about.

. . .

[ABC News, What's in that Smoky Cloud? Concerns about Air Quality, Last Updated: Sep 13, 2001, http://abclocal.go.com/wabc/health/WABC_oncall_091301asbestos.html]

9/14/01

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.

. . .

EPA has found variable asbestos levels in bulk debris and dust on the ground, but EPA continues to believe that there is no significant health risk to the general public in the coming days. Appropriate steps are being taken to clean up this dust and debris.

"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.. "Keeping the streets clean and being careful not to track dust into buildings will help protect workers from remaining debris."

Air Samples taken on Sept. 13 th inside buildings in New York's financial district were negative for asbestos. Debris samples collected outside buildings on cars and other surfaces contained small percentages of asbestos, ranging from 2.1 to 3.3 % slightly above the 1 percent trigger for defining asbestos material. *[emphasis added]*

. . .

[Headquarters Press Release, Washington, DC, For Release 09/14/2001, EPA, OSHA UPDATE ASBESTOS DATA, CONTINUE TO REASSURE PUBLIC ABOUT CONTAMINATION FEARS, www.epa.gov]

9/14/01

Some samples of the dust that cloaked the disaster scene, victims and rescuers on

Tuesday showed slightly elevated levels of lead and asbestos, the agency said. But by Wednesday, levels of the substances had dropped below the threshold of any concern, said Bonnie Bellow, a spokeswoman for the Environmental Protection Agency. Tests on samples taken yesterday would not be completed until today, she said.

. . .

[THE CHEMICALS, Monitors Say Health Risk From Smoke Is Very Small, By ANDREW C. REVKIN, 9/14/01, NY Times]

9/14/01

Of the 24 dust samples the agency took in the first two days of the chaos, many contained asbestos, but only one registered levels above acceptable maximums, says EPA spokesperson Tina Kreisher. That sample, taken from very near the epicenter of the disaster in Manhattan's financial district, contained 4.5 percent asbestos fibers. It was taken as agents fled the collapsing buildings on Tuesday. Dust samples from Thursday, she says, also showed elevated levels of 2.1 percent to 3.3 percent. A level of 1 percent or less is considered safe.

. . .

[Asbestos Alert. How much of the chemical does the World Trade Center wreckage contain? By David France and Erika Check, 9/14/01, NEWSWEEK WEB EXCLUSIVE, http://msnbc.com/news/629268.asp?0sp=w12b2&cp1=1]

9/14/01

Nearly four days after the World Trade Towers collapse sent massive columns of dust and smoke over lower Manhattan and into the shifting winds around New York Harbor, there is still no clear picture of how much asbestos or other hazardous materials may have been set free into the environment, officials say.

BUT IN THE MEANTIME, the federal Environmental Protection Agency is beginning to enforce measures meant to keep the untold pollutants from spreading any further than they already have, says EPA administrator Christine Todd Whitman, who maintains that the risks are negligible.

. . .

Of the 24 dust samples the agency took in the first two days of the chaos, many contained asbestos, but only one registered levels above acceptable maximums, says EPA spokesperson Tina Kreisher. That sample, taken from very near the epicenter of the disaster in Manhattan's financial district, contained 4.5 percent asbestos fibers. It was taken as agents fled the collapsing buildings on Tuesday. Dust samples from Thursday, she says, also showed elevated levels of 2.1 percent to 3.3 percent. A level of 1 percent or less is considered safe.

. . .

Given these assurances, officials have said they are considering reopening the New York Stock Exchange on Monday, though it is just a few blocks from the Twin Towers.

. . .

[Asbestos Alert. How much of the chemical does the World Trade Center wreckage contain? By David France and Erika Check, 9/14/01, NEWSWEEK WEB EXCLUSIVE, http://msnbc.com/news/629268.asp?0sp=w12b2&cp1=1]

9/21/01
Whitman detailed dust sampling undertaken thus far at the World Trade Center site, and confirmed that EPA has done a total of 101 dust samples, of which 37 were slightly over the one percent asbestos (the amount above which material is considered asbestos-containing).
. . .
[EPA press release, 9/21/01, www.epa.gov]

10/1/01 [approximate date]
Benchmarks, Standards and Guidelines Established to Protect Public Health

Since September 11, the U.S. Environmental Protection Agency (EPA) and other federal agencies have been taking samples of the air, dust, water, river sediments and drinking water from the World Trade Center site and surrounding areas in Manhattan, Brooklyn, Staten Island and New Jersey. EPA and other agencies have analyzed these samples for the presence of pollutants that might pose a health risk to response workers and the public. The samples are evaluated against a variety of benchmarks, standards and guidelines established to protect public health under various conditions. EPA considers the amount of time a person is exposed to a particular pollutant and where a school, workplace or home i n creating these criteria.

The following is a description of some the benchmarks, standards and guidelines EPA is using to evaluate environmental conditions in the aftermath of the World Trade Center disaster.

ASBESTOS . . . In Dust

If a substance contains 1% or more asbestos, it is considered to be an "asbestos-containing material." There are federal regulations in place to ensure the proper handling and disposal of asbestos-containing material. If a substance contains less than 1% asbestos, these regulations do not apply.

EPA is using the 1% definition in evaluating dust samples from in and around ground zero. The vast majority of the samples taken to date have levels of asbestos below 1%. In fact, in an urban environment like New York City, we can expect the presence of a low level of asbestos under normal circumstances (these low everyday levels are called "background levels").

The majority of areas in which EPA has found levels of asbestos above the 1% definition have been in the vicinity of the work zone at the World Trade Center site.
. . .
[EPA website responding to WTC disaster, guidance on standards, approximate date 1-/1/01, http://www.epa.gov/epahome/wtc/activities.htm]

10/3/01

Asbestos Monitoring Data Bulk Dust and Debris Samples:
EPA and OSHA have also sampled dust at the site and in the surrounding area for asbestos.

Of 177 bulk samples collected by EPA and OSHA, 48 contained more than one percent asbestos, the level EPA and OSHA use to define asbestos-containing material. The existence of dust that contains more than one percent of asbestos does not in itself constitute a significant health hazard ambient air samples are more accurate measures of actual exposure potential, and asbestos is primarily considered hazardous after long-term exposure but dust samples do prov ide important information about potential exposure.

. . .

[Headquarters Press Release, 10/03/2001, EPA AND OSHA WEB SITES PROVIDE ENVIRONMENTAL MONITORING DATA FROM WORLD TRADE CENTER AND SURROUNDING AREAS, www.epa.gov]

One of the first decisions that EPA had to make when sampling for asbestos in the dust from the WTC collapse was what reference value to use when reporting the data in other words, at what concentration of asbestos in the bulk dust samples would the Agency characterize the dust as containing asbestos in quantities of significance? EPA elected to use the definition of ACM [asbestos containing material] from the NESHAPs regulations i. e., the 1% asbestos content standard.

. . .

[Mugdan, Walter E., Esq. (January 25, 2002) Environmental law issues raised by terrorist events in 2001. Speech before the NY Bar Association. Posted at www.NYenviroLAW.org]

10/25/01

EPA is using the 1% definition in evaluation exterior dust samples in the Lower Manhattan area near the World Trade Center. All affected landlords have been instructed to test dust samples within their buildings utilizing this standard. Landlords were notified that they should not reopen any building until a competent professional had properly inspected their premise. If more than 1% asbestos was found and testing and cleaning was necessary, it had to be performed by the certified personnel.

. . .

[Joel A. Miele, Sr., P.E. Commissioner, NYC Dept. of Environmental Protection, letter to Residents of Lower Manhattan, 10/25/01]

1/13/02

All the agencies play down the importance of test results that found dust samples that contained less then 1 percent asbestos.

"They keep calling it a trace. This implies to the public that there is no hazard from it," said Dr. Jerrold Abraham, director of environmental and occupational pathology at Upstate Medical University in Syracuse. "If you're talking about pure chrysotile asbestos, there are 10 billion or more fibers per gram, or about a fifth of a teaspoon. "Their whole

measuring and reporting system needs to be made more honest."

The EPA's Bellow tried to answer the criticism.

"We didn't see ourselves as the primary source for information on what the health implications were. We're not a health agency," she said, adding that these are national issues that EPA headquarters should be addressing.

. . .

[NY officials underestimate danger, 1/13/01, By Andrew Schneider, This story was published in A-section of The Post-Dispatch. Updated by the St. Louis Dispatch on its anniversary date, 1/13/03, under a new title, "World trade center attack asbestos health threat" and can be found at www.stltoday.com]

1/25/02

One of the first decisions that EPA had to make when sampling for asbestos in the dust from the WTC collapse was what reference value to use when reporting the data in other words, at what concentration of asbestos in the bulk dust samples would the Agency characterize the dust as containing asbestos in quantities of significance? EPA elected to use the definition of ACM [asbestos containing material] from the NESHAPs regulations i. e., the 1% asbestos content standard.

. . .

Around 35% of the samples of bulk dust taken in Lower Manhattan in the first few days after the collapse exceeded the 1% level.

. . .

By contrast, when WTC dust was found to contain concentrations in excess of 1%, it was nevertheless still quite low typically between 1% and 4%.

. . .

[Mugdan, Walter E. (January 25, 2002) Environmental law issues raised by terrorist events. Speech before the NY Bar Association, NYC. Walter Mugdan is Regional Counsel for EPA Region 2. Posted at www.NYenviroLAW.org]

EPA recants claim that 1% asbestos in WTC dust is safe in April, 2002

My 4/30/02 memorandum, abstracte below, documented that Region 2 has now officially recanted earlier claims that 1% asbestos is safe. This is apparently because a journalist confronted EPA with the documentation in my 3/11/02 memo:

RECENTLY REGION 2 REVERSES CLAIM THAT 1% IS SAFE LEVEL

EPA Region 2 has recently reversed their position that 1% asbestos in dusts is a safe level. In a March 21, 2002 statement to the press, EPA stated that the 1% level was only a "guideline," but not a health standard.

[Gonzales, J. (March 21, 2002) A Red Flag on Air Tests at WTC, NY Daily News]

> In the days after Sept. 11, federal officials repeatedly referred to two "standards," one for asbestos in dust and debris and another for asbestos fibers in air. For dust and debris, the agency standard was 1% asbestos content. For air, it was usually 70 asbestos fibers per square millimeter of a testing filter.
>
> . . .
>
> But as Jenkins explains in her memo, federal regulations never meant the 1% figure to be considered a health standard or even to be applied to measure dust.
>
> . . .
>
> "We have never said it was a health standard," said the EPA's Mears about the 1%. "We're only using it as a guideline. We say clean up the dust and get rid of the dust regardless of whether it's 1% or below 1% it doesn't matter."

In a January 25, 2002 speech, Counsel for Region 2, Walter Mugdan, also stated that the 1% level was not a health standard, but only the detection limit of the PLM method: Note that Walter Mugdan is also incorrect in claiming that PLM is the required analytical method for anything relating to asbestos.

> Note that the 1% standard is not necessarily health- or risk-based, but rather keyed to the detection limits of the specified analytical method [PLM].

. . . *[Jenkins, 4/30/02]*

110 Liberty St. study – WTC dust with less than 1% asbestos cause hazardous levels

EPA's study on the cleaning of a building in lower Manhattan at 110 Liberty St., contaminated with WTC dust, proves irrefutably that EPA itself found that WTC dust containing less than 1% asbestos causes hazardous air levels.

The following is a direct quote from the study released 6/4/03 by EPA. A mixed use residential and commercial building at 110 Liberty Street was found by EPA to have hazardous levels of WTC-related contaminants, such as asbestos, lead, silica, and fiberglass. These are EPA's conclusions, not the conclusions of somebody else interpreting the data.

> The pre-cleaning analytical results for all of the data sets listed above were also evaluated to determine if the concentration of contaminants in the dust were elevated above health-based benchmarks. . . . Based on pre-cleaning data, there were ten residential units and five commercial units that exceeded a health-based benchmark for either lead, dioxin, PAH, or some combination of the three compounds. Based on post-cleaning data, an additional three residential units and one common area exceeded a healthbased benchmark for either asbestos, lead, MMVF, or alpha-quartz, or a combination of these compounds.
>
> Cumulatively, nineteen sites inside the building or 76 percent exceeded a health-based benchmark for one or more contaminants associated with the WTC collapse. This indicates that some contaminant concentrations exceeded health-based benchmarks.
>
> . . .

> *[There were 13 residential units and 6 businesses total.]*
>
> *[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, p. 108, http://epa.gov/wtc/confirmation_clean_study.htm]*

Page 17 of the study describes the testing of the bulk, settled WTC dust in the building, responsible for the hazardous airborne levels:

> Prior to commencement of the study, bulk samples were collected from three units in the building. Samples were collected from units that contained excessive amounts of dust, in an attempt to characterize the asbestos concentration in dust from worst case locations in the building. . . . Analysis of the samples indicated that less than one percent asbestos was present.

As discussed in greater detail in the Section G on the 110 Liberty St. study, 7 out of 13 apartments had what EPA called "minimal" dust there was no vi sible WTC dust except under the baseboard heaters. But EPA had to completely abate most of these "minimal dust" apartments two times to get them to meet EPA's health benchmarks. Several of the "significant dust" apartments had to be cleaned 3 or 4 times, and some never passed EPA's testing.

EPA vermiculite study – dust less than 0.1% causes hazardous air levels

On 5/21/03, EPA released its study simulating the hazards of vermiculite attic insulation in homes.[50] Air levels of asbestos were measured for vermiculite insulation containing less than 0.1% asbestos, which is over 10 time less than 1%. Tests were performed during various activities, such as removing the insulation, installing it, moving boxes around in the insulation, or living in a house with the insulation undisturbed.

This is the first study that I am aware of that measured air concentrations of asbestos inside a confined space like a home, and correlated those air concentrations with the percent of asbestos in the dust or other material. In all other studies, concentrations of asbestos in the dusts have been measured as the amount of asbestos fibers per surface area, by using either EPA's ultrasonication extraction procedure for carpets, or wipe or microvacuum samples for hard surfaces. Although the measurement of the amount of fibers per surface area is much more relevant in terms of resuspension, a study where the material was measured by a volume percent is helpful in demonstrating the false EPA and NYC contentions that 1% asbestos in dust is safe.

Even though the insulation contained less than 0.1% asbestos, hazardous air levels occurred. Installing the insulation in the attic resulted in concentrations as high as 3.3 total asbestos fibers per cubic centimeter by TEM (3.3 s/cc or s/mL).[51] This would be 150 times the AHERA TEM clearance level of 0.022 s/cc (same as 70 s/mm^2).[52]

When the study simulated residential activities in the attic, such as moving around boxes, air asbestos levels were as high as 0.43 s/cc by TEM, which is 20 times the AHERA clearance level.[53]

Removal of the vermiculite insulation by the homeowner resulted in concentrations as high as 0.60 s/cc TEM, or 27 times the AHERA TEM clearance level.

These levels inside a house are much higher than what EPA measured in outside air at Ground Zero. As noted elsewhere, air concentrations in a confined space, such as a house or apartment, will be much higher than outside, even if the dust contains the same percentage of asbestos.

We would expect even higher levels in air for thick layers of WTC dusts, since they are more finely divided than vermiculite attic insulation, and more easily resuspended. There are no studies to my knowledge which tested air levels of asbestos for substantial accumulations of WTC dusts in a confined space where there were either actual or simulated human activities. All air tests by EPA were conducted only after extensive abatement, or prior to abatement under passive conditions. The studies by the Ground Zero Task Force and HP Environmental were also under passive conditions, meaning that the dusts on surfaces were undisturbed.

The elevated levels found in the EPA vermiculite attic insulation study could represent the minimum level to which NYC citizens were exposed when they removed the original layers WTC dust from their homes or offices using the NYC DOH do-it-yourself cleanup guidelines.

Using a HEPA vacuum would not have been any protection whatsoever from the elevated airborne levels generated by heavy dust layers, since simple movement in the dust by the person or cleaning equipment would resuspended fibers. The HEPA vacuum would never have a chance to remove them, as demonstrated by EPA studies on air levels during HEPA vacuuming.[54]

Early criticisms that 1% asbestos is not an EPA safe level

The following is documentation that 1% asbestos is not a safety standard from my 12/3/01 and 3/11/02 memoranda. This alleged 1% safety level was also addressed in my 12/19/01, 1/11/02, and 2/10/02 memoranda.

> 3/21/02
> In the days after Sept. 11, EPA officials used standards to determine dangerous asbestos contamination that were never intended to measure health risks, according to a new 43-page memo by a dissident Environmental Protection Agency scientist.
>
> Cate Jenkins, a 22-year veteran with the agency's Hazardous Waste Identification Division in Washington, charged that the agency "misrepresented safety levels and standards for asbestos" and failed to accurately detect possible health risks to the public.

Jenkins first criticized her agency's handling of the World Trade Center disaster in late November, arguing that EPA officials effectively "waived" federal asbestos guidelines by endorsing lenient cleanup methods.

Her latest memo raises new allegations that the standards the EPA publicized as benchmarks for judging asbestos contamination in both dust and air were intended only to measure the presence of asbestos in building materials.

An EPA spokeswoman roundly rejected Jenkins' charges yesterday and defended the agency's work. "We have a number of scientists in the agency who looked at Cate's approach and none of them agree with her view," said spokeswoman Mary Mears.

In the days after Sept. 11, federal officials repeatedly referred to two "standards," one for asbestos in dust and debris and another for asbestos fibers in air. For dust and debris, the agency standard was 1% asbestos content. For air, it was usually 70 asbestos fibers per square millimeter of a testing filter.

The "EPA has performed 62 dust sample analyses for the presence of asbestos and other substances. Most dust samples fall below EPA's definition of asbestos- containing material [1% asbestos]," EPA Administrator Christie Whitman announced Sept. 18.

Whitman was correct about one thing. Most dust samples were below the 1% standard, but a significant portion were not. Around 35% of those taken in the first few days were above 1%.

But as Jenkins explains in her memo, federal regulations never meant the 1% figure to be considered a health standard or even to be applied to measure dust. The standard was developed as a way to gauge whether any building material such as floor tiles or pipe insulation contained asbestos and should be considered hazardous waste requiring professional abatement. But any dust released by the breakup of such materials must be considered hazardous, Jenkins claims, because it came from asbestos-containing products in the Trade Center.

"She's absolutely correct, this is not a health-based standard," said Joel Shufro, an industrial hygienist with the New York Committee for Occupational Safety and Health. "People exposed to 1% or less can have significant exposure with adverse health impacts," he said.

"We have never said it was a health standard," said the EPA's Mears about the 1%. "We're only using it as a guideline. We say clean up the dust and get rid of the dust regardless of whether it's 1% or below 1% it doesn't m atter." According to Mears, the agency sent its vacuum trucks to clean all dust off area streets. "It's real easy to be a Monday morning quarterback," Mears said.

One Supporter. One person Jenkins has convinced is Rep. Jerrold Nadler (D-Manhattan). "A lot of New Yorkers have been exposed to very bad health risks, possibly even deaths years from now because EPA put out these standards as if they had anything to do with health risks," Nadler said.

. . .

[A Red Flag on Air Tests at WTC, By Juan Gonzalez, Daily News, 3/21/02]

3/11/02

In guidance under the Clean Air Act asbestos NESHAP, the EPA clearly states that the 1% level is only to be used to determine whether a building material itself contains asbestos, and that 1% is not a safe level, or a "standard." Under the NESHAP, any dusts or contamination resulting from the use of building materials containing asbestos, which are called emissions, are regulated at much, much lower concentrations of asbestos in the dusts themselves.

. . .

An asbestos-containing product, as stated by the regulation was defined for the first time to be a product with greater than 1% asbestos, by weight. The intent of the 1% limit was:

> . . . to ban the use of materials which contain significant quantities of asbestos, but to allow the use of materials which would (1) contain trace amounts of asbestos which occur in numerous natural substances, and (2) include very small quantities of asbestos (less than 1 percent) added to enhance the material's effectiveness. (38 FR 8821).
>
> It most be clearly understood that the EPA NESHAP definition of 1% by weight was not established to be a health-based standard. . . . [emphasis added]
>
> [US EPA (April 18, 1989) Interim Asbestos NESHAP Enforcement Guidance - "Friable asbestos" 1% by Area of Volume vs. 1% by Weight. Office of Enforcement and Compliance Monitoring EPA Publication No. EPA 560/5-88-001. Available online at: http://es.epa.gov/oeca/ore/aed/comp/ecomp/e6.html]

. . .

Region 2 Counsel agrees that the 1% level is not a safety standard, contradicting the other Region 2 claims. He states that this level only relates to the detection limit of the method that Region 2 chose to use in Lower Manhattan, the crude PLM method.

> Note that the 1% standard is not necessarily health- or risk-based, but rather keyed to the detection limits of the specified analytical method.
>
> [Mugdan, Walter E. (January 25, 2002) Environmental law issues raised by terrorist events. Speech before the NY Bar Association, NYC. Walter Mugdan is Regional Counsel for EPA Region 2. Posted at www.NYenviroLAW.org]

However, what Region 2 Counsel fails to admit is the fact that more sensitive test methods, namely TEM, is required by official EPA policy when the less sensitive test, PLM, fails to show the presence of asbestos. See later sections on the EPA guidance requiring TEM testing of settled dusts and other solid materials.

. . .

In Superfund guidance, EPA found 1% asbestos or lower is hazardous

In guidance for Superfund cleanup actions, EPA has also stated that less than1% asbestos in soils could present hazards:

> Questions and Answers about Asbestos and EPA's Libby Investigation
>
> Q : I recently read that EPA found less than 1% (or trace levels) asbestos at Fireman's Park and other locations that were sampled. Is that a safe level?
>
> A : This is a very difficult question, and at this time we are not sure. Levels at 1% or less may be safe. Even higher levels could be considered safe at remote locations

> where no one comes in contact with the material. The key to determining whether there is a risk is exposure. If there is no exposure pathway i.e., a way for the asbestos to get into your body, such as contact with the material, or people driving over the material so that they breathe in the fibers, there is no risk. Levels of 1% or less could present a risk where there is enough activity to stir up soil and cause asbestos fibers to become airborne. [www.epa.gov/region8/superfund/libby/qsafe.html]

Soils containing only 0.001% asbestos can lead to hazardous air levels

One study found that soils containing only 0.001% asbestos can lead to air concentrations of 0.01 fibers per milliliter (f/mL) (PCM). As seen from the preceding section on asbestos in air, this level of 0.01 f/mL is many times over either the EPA one-in-a-million cancer risk level of 0.000004 f/mL (PCM), or the typical background levels of asbestos in outdoor air of 0.000002 f/mL (PCM); or indoor air of 0.000003 f/mL (PCM).

> Suitable Action Levels **. . .** Airborne dust clouds were generated from mixtures of soils with different asbestos varieties in bulk concentrations ranging from 1 to 0.001 % asbestos. **. . .** The experiments showed very clearly that even the lowest bulk amphibole asbestos content tested (0.001%) was still capable of producing measurable airborne asbestos concentrations (greater than 0.01 fibers ml -1). [Addison, J. (1995) Vermiculite: A review of the mineralogy and health effects of vermiculite exploitation. Reg. Tox. and Pharm. 21: 397 - 405]

Decontamination of demolition sites must be cleaned up to background, not just 1%, under the EPA asbestos NESHAP

Under EPA's NESHAP, the surrounding soils around a demolition site must be cleaned up to background levels of asbestos.

Region 2 has attempted to draw guidance from these NESHAPs regulations, citing them in its justification for claiming that 1% is the cleanup level, drawing an analogy to the regulations for the asbestos containing building materials themselves.

The correct analogy, however, would be to compare what is required for soils surrounding a demolition site, where the WTC is considered the demolition site. As seen below, the surrounding soils are required to be cleaned up to background levels, not 1%.

Decontamination of Demolition Site

If the surrounding soil has been contaminated by the demolition activities at the site, the site must be cleaned up to background levels of asbestos contamination. Alternatively, the site may be operated in accordance with section 61.154 (Standard for active waste disposal sites) and closed in accordance with section 61.151 (Standard for inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations). However, according to 40 CFR 61.05, the establishment of an active waste site requires prior approval from EPA or the delegated State program. To clean up the site to background levels, it will probably be necessary to remove all the asbestos contaminated soil. The contaminated soil should be treated and disposed of as asbestos-containing waste material.

> Decontamination of Area Surrounding Demolition Site
> If a site assessment detects contamination of soil surrounding a demolition site, the site must be cleaned up to background levels of asbestos contamination. Alternatively, the site may be operated in accordance with section 61.154 (Standard for active waste disposal sites) and closed in accordance with section 61.151 (Standard for inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations). However, according to 40 CFR 61.05, the establishment of an active waste site requires prior approval from EPA or the delegated State program. To clean up the site to background levels, it will probably be necessary to remove all the asbestos contaminated soil. The contaminated soil should be treated and disposed of as asbestos-containing waste material. . . . [US EPA (1994) Asbestos/NESHAP Demolition Decision Tree. EPA Manufacturing, Energy, and Transportation Division, Office of Compliance. Available from the EPA OPPTS Ombudsman's office]

. . .

Under both the asbestos NESHAP and AHERA regulations, ZERO emissions of asbestos-containing dusts are required, not "emissions of dusts containing less than 1% asbestos."

In the collapse of the WTC, the airborne dusts are also analogous to the dust emissions from the transport or disposal of asbestos wastes under AHERA or the NESHAP. From the above section, they are probably more analogous to contaminated soils around a demolition site. They are not, however, as Region 2 is trying to argue, analogous to the original building materials themselves where the 1% rule applies..

The requirement for zero emissions, not emissions of dusts containing less than 1% asbestos, is made clear in the following guidance and regulations:

> [NESHAP] Q: Is there a numeric emission limit for the release of asbestos fibers during renovations or demolitions in the asbestos NESHAP regulation?
> A: No, the Asbestos NESHAP relating to demolitions or renovations is a work practice standard. This means that it does not place specific numerical emission limitations for asbestos fibers on asbestos demolitions and removals. Instead, it requires specific actions be taken to control emissions. However, the Asbestos NESHAP does specify zero visible emissions to the outside air from activity relating to the transport and disposal of asbestos waste. [US EPA. Common Questions on the Asbestos NESHAP. Posted at http://www.epa.gov/opptintr/asbestos/neshap.pdf]
>
> [NESHAP] 40 CFR §61.144 Standard for manufacturing. . . .
> (b) Standard. Each owner or operator of any of the manufacturing operations to which this section applies shall either:
> (1) Discharge no visible emissions to the outside air from these operations or from any building or structure in which they are conducted or from any other fugitive sources; or
> (2) Use the methods specified by §61.152 to clean emissions from these operations containing particulate asbestos material before they escape to, or are vented to, the outside air.
> (3) Monitor each potential source of asbestos emissions from any part of the manufacturing facility, including air cleaning devices, process equipment, and buildings housing material processing and handling equipment . . .
>
> [AHERA] 40 CFR § 763 - Appendix D to Subpart E -- Transport and Disposal of

> Asbestos Waste
> For the purposes of this appendix, transport is defined as all activities from receipt of the containerized asbestos waste at the generation site until it has been unloaded at the disposal site. Current EPA regulations state that there must be no visible emissions to the outside air during waste transport. However, recognizing the potential hazards and subsequent liabilities associated with exposure, the following additional precautions are recommended.

. . .

The regulations themselves define the building materials as those containing 1% or more asbestos, and the dusts emanating from these materials are defined as emissions or debris. The 1% regulations do not apply to the emissions. . . . [*AHERA] 40 CFR §763.83 Definitions]*

. . .

<u>The asbestos-free level is "no asbestos detected by TEM" not 1%</u>

The NESHAP regulations themselves require the use of transmission electron microscopy (TEM) to determine whether wastes can be considered "asbestos free." The standard for being asbestos free is not 1%, but instead no detectable asbestos by the most sensitive test method, TEM. The use of polarized light microscopy (PLM) is not sufficient according to the regulations, because this method cannot reliably determine asbestos at concentrations less than 1%, and because this method cannot detect the thinner, smaller asbestos fibers, such as chrysotile.

> [NESHAP] 40 CFR § 61
> §61.155 Standard for operations that convert asbestos-containing waste material into nonasbestos (asbestos-free) material . . .
> (b) Conduct a start-up performance test. Test results shall include:
> . . .
> (3) Results of analyses, using transmission electron microscopy [TEM]<u>, that document that the output materials are free of asbestos</u>. Samples for analysis are to be collected as 8-hour composite samples (one 200-gram (7-ounce) sample per hour), beginning with the initial introduction of RACM or asbestos-containing waste material and continuing until the end of the performance test.
> . . .
> (c) . . . Transmission electron microscopy (TEM) shall be used to analyze the output material for the presence of asbestos. During the initial 90-day period, all output materials must be stored on-site until analysis shows the material to be asbestos-free or disposed of as asbestos- containing waste material according to §61.150 . . . *[emphasis added]*

<u>12/3/01</u>

The EPA has officially stated that asbestos levels LOWER than 1% could present health hazards :

> Levels at 1% or less may be safe. Even higher levels could be considered safe at remote locations where no one comes in contact with the material. The key to determining whether there is a risk is exposure. If there is no exposure pathway i.e., a way for the asbestos to get into your body, such as contact with the material, or people driving over

> the material so that they breathe in the fibers, there is no risk. Levels of 1% or less could present a risk where there is enough activity to stir up soil and cause asbestos fibers to become airborne. [www.epa.gov/region8/superfund/libby/qsafe.html]

. . .

The Ground Zero Task Force study confirms that asbestos concentrations at less than 1% in surface dusts can lead to airborne concentrations over established limits

. . . *[Jenkins 12/3/01 memorandum]*

L: TESTING DUSTS – EPA REFUSAL TO USE ELECTRON MICROSCOPES

"Were EPA actions and decisions in regard to evaluating, mitigating, and controlling risks to human health from exposure to indoor air pollutants in the WTC area consistent with applicable statutes, regulations, policies, and guidance?" ***[1/27/03 EPA IG report]***

This section of the report addresses EPA's failure to use electron microscope methods for settled dusts. These test methods are called TEM for transmission electron microscopy. EPA chose to use the antiquated light microscope method instead, called PLM (polarized light microscopy) for WTC dust both outdoors and inside apartments. With PLM, the test gives false negative results no asbes tos found.

The EPA IG report of 1/27/03 asks the cryptic question of whether EPA's decisions were consistent with "consistent with applicable statutes, regulations, policies, and guidance." This section answers that question in regards to the use of TEM electron microscopy for settled dust, whether that dust is in bulk form (enough to scoop into a bag), or whether there is a thin layer that needs to be tested by wipe sampling, a micro vacuum sampling apparatus, or by EPA's ultrasonification extraction procedure for carpets and other soft materials..

EPA Region 2 refused free TEM laboratory resources from Region 8 in a conference call on 9/12/01. Region 8 had a contract with a mobile laboratory that could have been on the WTC scene in 45 minutes. Region 2 told Region 8: "We don't want you fucking cowboys here. The best thing they could do is re-assign you to Alaska." This scandal is covered in Section L of this report.

After 9/11, EPA only offered the results from the cheap, antiquated PLM method to citizens of New York to test whether the settled dust they were exposed to contained asbestos. But EPA had the results of the more sophisticated TEM electron microscope test for its own building at 290 Broadway in Manhattan. They had these results by 9/14/01, finding asbestos where the old PLM method did not find at the EPA building. Armed with this special information, EPA had it own building evacuated and professionally abated. This incident is addressed in Section N of this report.

Of course, EPA has and is using the TEM electron microscope method at other contamination sites around the country. The best example is the Libby, Montana Superfund site, where interior dusts inside residences, as well as bulk outdoor dust, were tested with TEM methods. That subject is also addressed in Sections L and O.

Why TEM electron microscope asbestos methods are needed for WTC dust

Because of the force of the WTC implosion, asbestos fibers were highly pulverized into smaller than usual fiber sizes. With the old PLM light microscope method, many of the thin WTC asbestos fibers, fibers that are still longer than 5 micrometers long (5 µg,, or 5 microns), cannot be seen.[55] EPA has recognized the limitations of the old PLM light microscope method for years. EPA developed, and required the use of the newer electron microscopy method for bulk asbestos materials through official published guidance.

The following is a description of the need for PLM versus TEM testing of asbestos:

> The importance of using instruments with the appropriate resolution when counting asbestos fibers is further emphasized in that a single "fibril" of chrysotile may be as thin as 50nm while those of amphiboles are larger at approximately 500nm [Mueller and Stanley, 1975]. Thus counting fibers with the light microscope from either environmental samples or from tissue, yields data which, at best, provide information on only a small percentage of the overall fiber burden since the diameters of most asbestos fibers are below the limit of resolution of the light microscope [Ashcroft and Heppleston, 1973; Crossman et al., 1996; Pooley and Ranson, 1986; Murphy et al., 1986]. It was the recognition of this limitation of the light microscope for asbestos fiber analysis that resulted in the analytical transmission electron microscope being defined as the "state of the art" instrument for analysis of air samples for asbestos under the Asbestos Hazard Emergency Response Act (Title II of the Toxic Substance Control Act 15, U.S.C. Sections 2641 through 2654). The counting protocol when using TEM provides not only a morphological definition of the structures to be counted, but allows the analyst the capability to use magnification appropriate to "see" those structures that are below the level of detection by the light microscope. Simply because the analytical transmission electron microscope is used in a count does not mean the data reflect a true representation of the fiber burden because the scan must be made at a sufficiently high magnification to permit detection of short as well as long thin fibers [Murai et al., 1994].
>
> This issue is of particular relevance when discussing the subject of fiber length and pathogenicity since results from models in which fiber length was determined solely by the light microscope must be critiqued with these limitations in mind.
>
> . . .
>
> *[Accepted for publication in the American Journal of Industrial Medicine, 4/28/03, Asbestos Fiber Length as Related to Potential Pathogenicity: A Critical Review, Ronald F. Dodson, Ph.D., FCCP, FAHA; Mark A.L. Atkinson, M.A., D.Phil.; and Jeffrey L. Levin, M.D., M.S.P.H., The University of Texas Health Center at Tyler, Tyler, TX]*

EPA reverses – performs TEM tests for 110 Liberty St. study near Ground Zero

Long after EPA and the NYC DEP instructed NYC citizens and health officials that dusts in the interior of buildings was not hazardous unless it contained more than 1% asbestos, as measured

by the old PLM light microscope method, a newly released study by EPA reveals that EPA itself performed TEM analyses of dusts inside a building at 110 Liberty St. to assess cleaning methods. This was the first time that EPA used TEM analyses of dusts related to the WTC, with the exception of using TEM dust analyses in its own building at 290 Broadway a few days after 9/11.

EPA's use of TEM for the 110 Liberty St. study constitutes an admission by EPA that TEM testing is necessary to detect the presence of asbestos laden dust and the efficiency of any cleaning procedure. See Section G for a more complete discussion of EPA's WTC dust cleaning study at 110 Liberty St.[56]

Criticisms and press coverage of EPA not using TEM analyses for WTC dust

EPA Region 2 is apparently currently claiming that they were unaware of the need to use TEM and the other better test methods, and that there was a training problem:

> 3/19/03
> With backing from top agency enforcement officials, EPA's research office has begun an initiative to ensure the uniformity of the agency's analytical methods across regions and program offices.
> . . .
> The effort was prompted by concerns following Region II's investigation of environmental hazards at the World Trade Center site and their consistency with asbestos measures used by EPA Region VIII in Libby, MT.
>
> "When the agency uses different measures, then people can begin to ascribe motives, so the Administrator prompted us to look into this," according to EPA research chief and science advisor Paul Gilman. "It's hard to have credible decisions without credible data,"
> . . .
> An EPA official adds "this is an effort to make the science better, to put good science out there for the regulated community to use. . . . new group that will examine the creation, verification and validation of environmental methods and training across the agency.
> . . .
> *[From Inside EPA Environmental Policy Alert, 3/19/03, www.insideepa.com]*

I publically criticized EPA's failure to use TEM analyses for bulk WTC dust, failure to take wipe and/or microvacuum samples of hard smooth surfaces inside buildings, and failure to use EPA's ultrasonification extraction method for carpets and other porous materials early in the WTC investigation through memoranda which were received by relevant staff at Region 2. Their first alert of the need to use TEM came on 9/12/01 from Region 8. It is absurd to claim that there was any lack of training or knowledge of EPA requirements.

Below are excerpts of press on the TEM v. PLM issue, as well as early criticisms of EPA:

5/2/02

A seven-story co-op building half a mile north of Ground Zero was recently found to be contaminated with high levels of asbestos.

The building, at 150 Franklin St. in Tribeca, has housed a family-run child care center for years, and neither the child care center nor other tenants in the building evacuated their homes following the Sept. 11 attack on the World Trade Center.

Like many people who live downtown, the building's tenants simply cleaned up the dust in their apartments and tried to return to normal. Not until mid-April sev en months after the collapse of the twin towers did the buildi ng's co-op board discover the high asbestos levels.

. . .

Stratton, whose wife operates the Treehouse toddler center out of the couple's apartment, insisted that "the children have not been exposed to anything," because no asbestos was found inside the toddler center. The building's elevator, like many in the former warehouse buildings that dot Tribeca, has an iron gate instead of a solid door, and its shaft has windows that face the street. Since several of the shaft's windows were broken on Sept. 11, dust from the trade center collapse may have easily penetrated the elevator area, Stratton conceded.

At the time, according to Stratton, the co-op board believed the assurances from EPA and city officials that air quality downtown was safe, so it did not conduct extensive testing within the building. One of the co-op tenants, however, said she was worried about environmental hazards.

. . .

The one tenant was worried enough that by mid-April she asked Joel Kupferman of the New York Environmental Law and Justice Project to come to 150 Franklin and collect dust samples. Kupferman sent three samples to a laboratory. The lab results showed levels of 1.2%, 1.4% and 1.8% asbestos *[by using TEM electron microscopy]*. He immediately notified the EPA and the city's Department of Environmental Protection, and those agencies analyzed new samples on April 18.

The DEP, using a crude analytical method called polarized light microscopy, detected no asbestos. But EPA scientists, using a more sophisticated method called transmission electron microscopy, found even higher levels, from 2% to 5% asbestos. "We recommended that it be professionally cleaned," said EPA spokesperson Mary Mears.

. . . *[Asbestos Fallout Is Found In Co-op Near WTC Site, Juan Gonzales, 5/2/02, NY Daily News]*

5/9/02

But Ms. Jenkins and other critics of her agency's performance have said that one of the EPA's failings was its unwillingness to urge New York to use the most-up-to-date method of asbestos testing -- a method employing electron microscopes that the EPA has used elsewhere. The city instead advised building owners to use only an older technique, in which testers search for contaminants using polarized-light microscopes that work much like ones used in high-school chemistry labs. Electron microscopes, used with computers, can detect asbestos fibers that light scopes don't reveal.

. . .

Owners of many large commercial buildings have done thorough cleanups followed by state-of-the-art testing, according to outside firms doing much of this work. But owners of many smaller buildings have cut corners, according to the environmental firms. Tests with electron microscopes, for example, cost as much as $100 per sample, with potentially hundreds of samples necessary in a typical building. The light-scope tests cost as little as $10 a sample.

Dow Jones & Co., which publishes The Wall Street Journal, said it has relied heavily on electron scopes in testing the seven floors of the World Financial Center building it leases across the street from the disaster site. The most recent testing found a "small spot" of asbestos contamination in a light fixture on the 11th floor, Dow Jones spokesman Steven Goldstein said. That area is being recleaned. The company, which evacuated its offices Sept. 11, plans to return to the building in late July or early August, Mr. Goldstein added.

In contrast, many residential buildings have relied on the light scopes, which the New York City Department of Environmental Protection recommended in a Sept. 14 memo to building owners. "I've had several apartment landlords tell me, 'Just go with the memo,' " says Steve Vanderwoude, vice president of Applied Technology Services Inc., a testing firm in New Rochelle, N.Y.

Some residents who have arranged for their own tests using electron scopes have found asbestos missed by light testing. At 150 Franklin St., a seven-story cooperatively owned building several blocks north of the disaster site, residents each vacuumed and wiped down their apartments, following the city's guidelines. They also swept the roof and other common areas.

Still, electron-scope testing last month found asbestos levels of between 1.2% and 1.8% of sampled material. One sample was taken from a third-floor elevator shaft, near a day-care center. Similar levels were found at two locations on the building's roof. Medical experts say there isn't a "safe" level of the substance, but the federal government requires asbestos removal from work sites if the level exceeds 1%.

After receiving the test results on April 15, the New York Environmental Law and Justice Project, a tenants-rights group assisting residents at 150 Franklin St., notified city authorities. The city found no asbestos when it tested the building using light scopes.

But EPA officials agreed, in this case, to retest the city's samples. Using an electron scope, the federal agency said it found asbestos exceeding 1%.

. . .

[emphasis added] [AFTERMATH OF TERROR, Bureaucratic Buck-Passing Delayed Asbestos Cleanup After 9/11 Attacks, By JIM CARLTON, 5/9/02, THE WALL STREET JOURNAL]

5/8/02

Succumbing to pressure from angry tenants near the site of the former World Trade Center, the Environmental Protection Agency has agreed to take responsibility for cleanup and testing of residences potentially contaminated with asbestos after the Sept. 11 terrorist attacks.

. . .
They also say the testing methodology needs to be more comprehensive than what city officials had required after Sept. 11. The city essentially had recommended landlords rely on polarized-light microscopes to detect asbestos. But the light scopes aren't as sensitive as newer electron microscopes, which the residents have used to find asbestos in areas cleared by light scopes.
. . .
[EPA, in Reversal, to Test Homes In Lower Manhattan for Asbestos By JIM CARLTON, 5/8/02, THE WALL STREET JOURNAL]

12/19/01
The NYC Department of Environmental Protection (NYC DEP) gave impossible and unsafe instructions to owners of buildings. Furthermore, the instructions violated the standards set by the federal EPA. The NYC DEP advised building owners1 to test dusts inside buildings to see if they were over 1%. They said that if the dusts were over 1%, a professional asbestos abatement contractor should be used for the cleanup:

> EPA is using the 1% definition in evaluating exterior dust samples in the Lower Manhattan area near the World Trade Center. All affected landlords have been instructed to test dust samples within their buildings utilizing this standard. Landlords were notified that they should not reopen any building until a competent professional had properly inspected their premise. If more than 1% asbestos was found and testing and cleaning was necessary, it had to be performed by certified personnel.

Unless the windows were blown out by the blast, interior dusts are in too thin a layer to enable them to be scooped up into a jar or bag. Only dusts that are in “bulk” form, which can be put into a bag or jar, can be tested for the percentage of asbestos.

If there is only a thin, visible surface dusting, or even an invisible layer of dust, you are forced to use what are called “wipe” samples or “microvacuum” samples. Wipe samples can only be tested for the number of asbestos fibers per area, not a percentage of asbestos in the total dust. Microvacuum samples are also typically only analyzed for number of structures per area, although there is a rarely used, very expensive ASTM method for microvacuum samples that can sometimes be employed to give mass concentration - percent values. . . . *[Jenkins, 12/19/01]*

1/11/02
This memorandum compares data for asbestos in settled dusts and air inside residences in the town of Libby, Montana, which is designated as a Superfund site due to this residential contamination, and similar data for the interior of buildings in Lower Manhattan contaminated by fallout from the World Trade Center (WTC).
. . .
EPA is using this AHERA TEM clearance test and claiming that if is shows 70 or fewer asbestos structures per square millimeter, then the air is safe. . . This statement by EPA is false and a gross misrepresentation of the AHERA regulations which do not in any way claim that a simple air test alone showing 70 or fewer structures per square millimeter can be used directly to determine if air is safe. . . . The first, and fatal problem in using

the AHERA TEM test is that it is quite insensitive. It cannot detect airborne asbestos at levels that are shown to cause excessive cancers. . . . EPA is conducting the AHERA TEM clearance test under passive conditions when the dusts are not being disturbed. . . . any activities which stir up dusts will result in vastly higher airborne asbestos concentrations.

. . .

By even performing the AHERA TEM clearance test in lieu of professional asbestos abatement, EPA is violating the AHERA regulations. This is because the AHERA TEM clearance test is only allowed in conjunction with a whole range of asbestos abatement procedures that go on prior to even taking the test. It was designed to catch only gross contamination problems caused by some worker on the asbestos abatement project, such as emptying one bag of asbestos contaminated material into another inside a room that had previously been carefully abated.

. . .

EPA data on bulk dusts taken outside buildings in Manhattan. All the analyses performed EPA for Manhattan used the less sensitive PLM method. EPA did not fraction the sample and use electron microscopy techniques in addition to PLM as did the Ground Zero Task Force study above. EPA in its risk assessment for Libby, however, noted that soil samples showing non-detectable asbestos by PLM alone actually had high levels when analyzed by scanning electron microscope (SEM) methods.

. . .

EPA data, PASSIVE CONDITIONS, AFTER INCOMPLETE CLEANUP. EPA has been using the simple AHERA TEM clearance test method inside buildings at the request of tenants and others. This is a violation of the AHERA protocols, which only allow this test to be performed AFTER professional and complete asbestos abatement, which must thoroughly clean all surfaces. The AHERA TEM clearance method is only meant as an inexpensive, but not an assurance by itself, that asbestos has been adequately abated. The use of a leaf blower or other strong fan in conjunction with taking the air sample would be needed for that in addition to wipe samples of surfaces. EPA Region 8 found that at Libby, even when there were activities going on to disturb dusts, air monitors worn by people sitting on couches, etc. always gave higher readings than a stationary air monitor in the same room (such as is the case in the AHERA TEM test).

. . . *[Jenkins 1/11/02]*

2/10/02

Even if testing is done at the low levels associated with asbestos health effects (0.000004 f/mL), there must be human activities or simulated human activities in the same room at the same time of the testing. When testing airborne asbestos levels inside homes in Libby, Montana, the Superfund site, EPA had both stationary air monitors and monitors worn by residents going about their normal daily activities. **. . .** *[Jenkins, 2/10/02]*

3/11/02

If asbestos were present at Region 2's detection limits, levels would be higher than the Libby Superfund site

The detection limits of the Region 2 air tests are also higher than or comparable to the

air found inside homes at the Libby Superfund site. An earlier section showed that if asbestos were present at the AHERA levels, it would be higher than in homes in Libby.

On other words, even if Region 2 found no asbestos, even testing inside residences with normal activities going on, it would not be able to say that the air was safer than at Libby. See the table below.

COMPARISON OF REGION 2 DETECTION LIMITS WITH LIBBY SUPERFUND SITE			
Higher Reg. 2 detection limits	0.0043 f/mL (PCM)	almost 2 times higher than Libby	
Lower Reg. 2 detection limits	0.0011 f/mL (PCM)	about one-half that in Libby	
AIR LEVELS INSIDE RESIDENCES IN LIBBY, MONTANA			
Average concentration, Libby residences	0.0024 f/mL (PCM)	0.0023 - 0.0024 f/mL (PCM), range	

. . .

EPA guidance requires the most sensitive method, transmission electron microscopy (TEM), for certain bulk materials under both the asbestos NESHAP and AHERA

Region 2 only used the less sensitive method, PLM, in violation of EPA policy

EPA advises against the use of polarized light microscopy (PLM) for those situations where the asbestos fibers are thin and cannot be detected by PLM. EPA has issued guidance for the use of a more sensitive test method for bulk materials (building materials, dusts and soils lying on surfaces) using transmission electron microscopy (TEM).

The asbestos fibers from the WTC are primarily of the chrysotile category, where many of the fibers are thin and cannot be detected using PLM. TEM is the more sensitive method that can detect them in settled dusts, soils, and other solid materials, as well as in air.

In 1994, EPA issued guidance to offer added precaution and protection for workers and building occupants under both the asbestos in schools rule (AHERA) and the Clean Air Act asbestos NESHAPS for the improved method for the analysis of bulk samples. EPA recommended that if any materials were found not to contain asbestos by the old method (PLM, polarized light microscopy) should be retested using transmission electron microscopy (TEM).

Abstracts of the EPA advisory from the *Federal Register* follow:

> This notice announces the availability of an improved asbestos bulk sample analysis test method for use with bulk samples collected for identification of asbestos-containing materials under the Asbestos Hazard Emergency Response Act (AHERA) regulations and the asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP).

. . .

The test method provides clarifications and improvements to the 1982 EPA ``Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (as found in 40 CFR part 763 Appendix A to Subpart F). Specifically, use of the improved method can provide more precise analytical results especially at low asbestos concentrations, enhanced analysis of floor tiles which may contain thin asbestos fibers below the limits of resolution of the polarized light microscope (PLM), and clearer instruction on the analysis of bulk materials, particularly where multiple layers are present.

The 1982 method is limited in that it does not provide guidance for analyzing materials that contain thin (<0.25 micrometers) asbestos fibers. As a consequence, floor tiles which were analyzed according to the 1982 method and for which negative results were reported may actually contain undetected asbestos. At this time EPA does not have data to support identification of other materials which may have thin fibers.

The improved method addresses the thin fiber limitation of the 1982 method by providing directions for using transmission electron microscopy (TEM). The test method includes improved procedures for reducing matrices so that fibers may be made available for microscopic analysis.

In light of the availability of the improved method, EPA recommends that local education agencies (LEAs) use the improved method in place of the 1982 procedures as found in 40 CFR part 763 Appendix A to Subpart F. EPA has made the determination that the improved method is more capable of producing accurate results than the 1982 protocol and thus serves as a preferred substitute method. Further, EPA recommends that LEAs which have PLM laboratory results indicating floor tiles to be non-asbestos-containing (asbestos present in less than or equal to 1 percent) reconsider whether these materials may have thin asbestos fibers.

. . .

Before undertaking activities which might trigger asbestos NESHAP requirements, it is recommended that LEAs consider resampling multi-layered materials which have been found to be nonasbestos-containing for AHERA purposes or assume them to be asbestos-containing prior to disturbance according to the guidelines set forth in this current notice, in the January 5, 1994 NESHAP *Federal Register* notice, and in the improved analytical method to avoid potential violation of the asbestos NESHAP. [*emphasis added*]

. . .

EPA NESHAP regulations require testing by the sensitive TEM method for asbestos-derived wastes to determine if they asbestos free

The asbestos-free level is "no asbestos detected by TEM" not 1%

The NESHAP regulations themselves require the use of transmission electron microscopy (TEM) to determine whether wastes can be considered "asbestos free." The standard for being asbestos free is not 1%, but instead no detectable asbestos by the most sensitive test method, TEM. The use of polarized light microscopy (PLM) is not sufficient according to the regulations, because this method cannot reliably determine asbestos at concentrations less than 1%, and because this method cannot detect the thinner, smaller asbestos fibers, such as chrysotile.

[NESHAP] 40 CFR § 61 §61.15 5 Standard for operations that convert asbestos-

containing waste material into nonasbestos (asbestos-free) material.

. . .

Each owner or operator of an operation that converts RACM and asbestos-containing waste material into nonasbestos (asbestos free) material shall: (a) Obtain the prior written approval of the Administrator to construct the facility**. . .**. In addition to the information requirements of §61.07(b)(3), a (i) Description of waste feed handling and temporary storage. (ii) Description of process operating conditions. (iii) Description of the handling and temporary storage of the end product. (iv) Description of the protocol to be followed when analyzing output materials by transmission electron microscopy.

. . .

(b) Conduct a start-up performance test. Test results shall include:

(1) A detailed description of the types and quantities of nonasbestos material, RACM, and asbestos-containing waste material processed, *e.g.,* asbestos cement products, friable asbestos insulation, plaster, wood, plastic, wire, etc. Test feed is to include the full range of materials that will be encountered in actual operation of the process.

(2) Results of analyses, using polarized light microscopy, that document the asbestos content of the wastes processed.

(3) Results of analyses, using transmission electron microscopy [TEM], that document that the output materials are free of asbestos. Samples for analysis are to be collected as 8-hour composite samples (one 200-gram (7-ounce) sample per hour), beginning with the initial introduction of RACM or asbestos-containing waste material and continuing until the end of the performance test.

. . .

(c) During the initial 90 days of operation **. . .** (2) Monitor input materials to ensure that they are consistent with the test feed materials described during start-up performance tests in paragraph (b)(1) of this section. (3) Collect and analyze samples, taken as 10-day composite samples (one 200-gram (7-ounce) sample collected every 8 hours of operation) of all output material for the presence of asbestos. Composite samples may be for fewer than 10 days. Transmission electron microscopy (TEM) shall be used to analyze the output material for the presence of asbestos. During the initial 90-day period, all output materials must be stored on-site until analysis shows the material to be asbestos-free or disposed of as asbestos- containing waste material according to §61.150**. . .**

(h) Nonasbestos (asbestos-free) output material is not subject to any of the provisions of this subpart. Output materials in which asbestos is detected, or output materials produced when the operating parameters deviated from those established during the startup performance testing, unless shown by TEM analysis to be asbestos-free, shall be considered to be asbestos-containing waste and shall be handled and disposed of according to §§61.150 and 61.154 or reprocessed while all of the established operating parameters are being met. *[emphasis added*]**. . .**

The Occupational Safety and Health Administration (OSHA) also recommends the use of sensitive TEM analyses for settled, bulk dusts and other solid asbestos materials. The following are the relevant OSHA regulations:

[OSHA] 29 CFR 1926.1101 Appendix A -Polarized Light Microscopy of Asbestos - Non-Mandatory

. . .

Light microscopy has been used for well over 100 years for the determination of mineral species. This analysis is carried out using specialized polarizing microscopes [PLM] as

> well as bright field microscopes. . . .
>
> When electron microscopy was applied to asbestos analysis, hundreds of fibers were discovered present too small to be visible in any light microscope [such as PLM]. There are two different types of electron microscope used for asbestos analysis: Scanning Electron Microscope (SEM) and Transmission Electron Microscope (TEM). Scanning Electron Microscopy is useful in identifying minerals. The SEM can provide two of the three pieces of information required to identify fibers by electron microscopy: morphology and chemistry. The third is structure as determined by Selected Area Electron Diffraction -- SAED which is performed in the TEM. Although the resolution of the SEM is sufficient for very fine fibers to be seen, accuracy of chemical analysis that can be performed on the fibers varies with fiber diameter in fibers of less than 0.2 um diameter. The TEM is a powerful tool to identify fibers too small to be resolved by light microscopy and should be used in conjunction with this method when necessary. The TEM can provide all three pieces of information required for fiber identification. Most fibers thicker than 1 um can adequately be defined in the light microscope.
>
> The light microscope remains as the best instrument for the determination of mineral type. This is because the minerals under investigation were first described analytically with the light microscope. It is inexpensive and gives positive identification for most samples analyzed. Further, when optical techniques [PLM] are inadequate, there is ample indication that alternative techniques [TEM and SEM] should be used for complete identification of the sample.
>
> . . .
>
> [*emphasis added*] [Code of Federal Regulations posted at either OSHA site at http://www.osha.gov/OshStd_toc/OSHA_Std_toc.html or http://www.access.gpo.gov/nara/cfr/cfr-table-search.html]

Settled dusts in Lower Manhattan had higher asbestos than soils in Libby, MT
Region 2 claims that asbestos levels are "low" in Manhattan dust

The settled dusts in Lower Manhattan tested in the early days after the WTC collapse had higher concentrations of asbestos than outdoor soils in the town of Libby, Montana, the Superfund site.

> Around 35% of the samples of bulk dust taken in Lower Manhattan in the first few days after the collapse exceeded the 1% level.
>
> . . .
>
> *[Mugdan, Walter E. (January 25, 2002) Environmental law issues raised by terrorist events. Speech before the NY Bar Association, NYC. Walter Mugdan is Regional Counsel for EPA Region 2.]*

There was a higher percentage of samples that had over 1% asbestos from the WTC than soils in Libby, Montana, the town that is a Superfund site. The concentrations of asbestos, when the asbestos was found, are the same in Libby as in Lower Manhattan. In Libby, soils from yards from residences, etc., are being removed because of the asbestos hazard they pose.

. . .

Region 2 Counsel has claimed that the asbestos concentration in WTC dusts was low and not a health hazard. This directly contradicts the findings of the extensive risk

assessment for Libby where the same concentrations, occurring less frequently, were the basis for placing Libby on the Superfund list:
. . .
Dusts from the collapse of the WTC present more risk than soils in Libby because they are a finely divided surface dust with no vegetation to hold them in place. Although the dusts from the WTC have now been removed to some extent, we do not know how effective the removal is to date, or whether dusts have been effectively removed from roofs, which have a larger surface area than the streets in Lower Manhattan.
. . . *[Jenkins, 3/11/02]*

4/30/02

This memorandum discusses side-by-side testing of the same dust samples ("bulk dust") from WTC fallout. Two different test methods were used. One method is transmission electron microscopy (TEM), which is very sensitive, detecting the very thin asbestos fibers that are known to predominate in WTC dusts, and also capable of detecting fibers at levels as low as 0.0001%. The other method is polarized light microscopy (PLM), using a standard light microscope, which cannot detect the thin fibers found in WTC dusts, and which can only reliably detect 1% or higher levels of asbestos. TEM is a much more sensitive method than PLM.

After the WTC collapse, EPA Region 2 only used the less sensitive method, PLM, for bulk dusts in Lower Manhattan. This is despite the fact that official EPA guidance requires the use of the more sensitive TEM methods when thin asbestos fibers are present, such as is the case for WTC fallout. EPA regulations and guidance require determining if any asbestos is present in dusts and other emissions from the original asbestos containing materials, by using the sensitive TEM method which can detect asbestos at concentrations much lower than 1%.
. . .
EPA Policy requires TEM for bulk dusts if small asbestos fibers present

Even if all personnel in Region 2 had never encountered a situation where there was a need to test dust for asbestos, then Region 2 was still obligated to follow the official EPA policy guidance that requires the use of TEM methods for dusts. EPA advises that TEM should be used when the asbestos fibers are thin, since they cannot be detected by PLM. The fact that WTC dust is predominantly thin fibers that cannot be detected by PLM was discussed earlier. The following are excerpts from EPA's 1994 Federal Register notice which instituted the policy to use TEM:
. . .
The Occupational Safety and Health Administration (OSHA) also recommends the use of the more sensitive TEM tests for settled bulk dusts instead of PLM. The following are the relevant parts of the OSHA regulations:
. . .
Comparison of results of side-by-side TEM and PLM tests on the same samples

The following table compares the results of TEM and PLM tests for the same samples of bulk dusts from the WTC collapse, tar and soils. More information on the materials and sampling is given after the table.

COMPARISON OF TEM and PLM TESTS FOR SAME SAMPLES				
	DATE	PARTY SAMPLING	**TEM** - asbestos	**PLM** - asbestos
150 Franklin St., NYC[57, 58]				
debris on roof - 1	4/17/02	EPA/NYC DEP	2.3 %	none detected
debris on roof - 3	4/17/02	EPA/NYC DEP	5.0 %	none detected
debris, ledge, elevator shaft, 3rd floor-31	4/17/02	EPA/NYC DEP	2.0 %	none detected
debris, ledge, elevator shaft, 3rd floor - 33	4/17/02	EPA/NYC DEP	2.2 %	none detected
WTC dust, roof, front	4/15 & 21/02	NYELJP	1.4 %	none detected
WTC dust, roof, rear	4/15 & 21/02	NYELJP	1.8 %	none detected
WTC dust, third floor, widow sill inside elevator shaft with broken window	4/15 & 21/02	NYELJP	1.2 %	2.9 % (probable lab problem, see below)
tar under sink	3/18/98	NYELJP	0.24	none detected
tar from roof	3/18/98	NYELJP	2.80	0.24
200 Rector Place, NYC[59]				
WTC dust, interior living room along left ledge of book case cabinet, after cleaning, Apt. 33F	12/17/01	Kallawaya, Inc.	present, up to 1%	none detected
WTC dust, living room, after cleaning, Apt. 33F	12/4/01	Kallawaya, Inc.	present	none detected
WTC dust, bedroom floor, after cleaning, Apt. 17 J	4/16/02	A. O. Lawrence	present	none detected
WTC dust, kitchen and dining room floor, after cleaning, Apt. 17J	4/16/02	A. O. Lawrence	present	none detected
EPA Region 2 building at 290 Broadway, NYC[60]				
Inside lobby by the security	9/14/01	Stratus Corp/GSA	present	none detected
Inside lobby by the entrance to bathroom	9/14/01	Stratus Corp/GSA	present	none detected
Inside lobby by the entrance to building	9/14/01	Stratus Corp/GSA	present	none detected
Outside by the main entrance	9/14/01	Stratus Corp/GSA	present	none detected
Outside on the sidewalk	9/14/01	Stratus Corp/GSA	present	none detected
Libby Montana Superfund site				
soils		EPA Region 8	"high levels" (scanning electron microscope, SEM, similar to TEM)	none detected

NYELJP samples from 150 Franklin St.

The New York Environmental Law and Justice Project (NYELJP) collected dust samples from the roof and from an elevator shaft with broken windows at 150 Franklin St., a co-op building. This address is 7 blocks north of the area defined by EPA Region 2 as being contaminated by fallout from the WTC. EPA Region 2, the NYC Department of Environmental Protection (DEP), and the NYC Department of Health repeatedly claimed that no asbestos found from WTC fallout this far away.

After finding asbestos at over 1% in all three samples using TEM test methods, the NYELJP contacted the NYC DEP. The DEP collected their own samples, but used PLM analyses and found no asbestos.

The NYELJP then contacted EPA Region 2, telling them that the DEP was wrong to have used PLM methods. As a result, Region 2 re-analyzed the samples taken by DEP using the TEM method. Region 2 found asbestos from 2 to 5 % using TEM. **. . .**
[Jenkins, 4/30/02]

M: WILLIAM MUSZYNSKI TO CHAIR "FORUM" TO INVESTIGATE WHY WTC TESTING DID NOT USE ELECTRON MICROSCOPES FOR DUSTS

"With backing from top agency enforcement officials, EPA's research office has begun an initiative to ensure the uniformity of the agency's analytical methods across regions and program offices. The new Forum on Environmental Measures is likely to enhance the credibility and defensibility of EPA assessments of environmental conditions in court, sources say . . .The effort was prompted by concerns following Region II's investigation of environmental hazards at the World Trade Center site and their consistency with asbestos measures used by EPA Region VIII in Libby, MT." ***[From Inside EPA Environmental Policy Alert, 3/19/03]***

"Were EPA actions and decisions in regard to evaluating, mitigating, and controlling risks to human health from exposure to indoor air pollutants in the WTC area consistent with applicable statutes, regulations, policies, and guidance?" ***[1/27/03 EPA IG report]***

One area ripe for investigation by the EPA IG is the role of Region 2's William Muszynski in actively refusing to use electron microscopes to identify asbestos in settled WTC dusts. Section L discussed the need and EPA requirements to use TEM electron microscope methods for settled dusts, instead of the antiquated light microscope PLM methods. WTC fallout is highly pulverized, and there are a lot of long, thin fibers which cannot be detected with PLM.

It is questionable that instead of being subject to an IG investigation, Muszynski now chairs a forum to "investigate" what went wrong with Region 2's choice of test methods for WTC fallout, and why Region 2's choices of methods were inconsistent with Region 8's. EPA's new forum "to ensure consistency of analytical methods" is described more completely below.

At a minimum, convening the "forum" is an admission that NYC citizens were treated disparately, and worse, than others by EPA in the aftermath of the WTC collapse.

3/19/03

EPA OFFICES BEGIN EFFORT TO ENSURE CONSISTENT ANALYTIC METHODS

With backing from top agency enforcement officials, EPA's research office has begun an initiative to ensure the uniformity of the agency's analytical methods across regions and program offices.

The new Forum on Environmental Measures is likely to enhance the credibility and defensibility of EPA assessments of environmental conditions in court, sources say. As a result, it is being strongly endorsed by EPA enforcement chief J.P. Suarez, in part

> because it would enhance the agency's legal clout and standing with the regulated community.
>
> **The effort was prompted by concerns following Region II's investigation of environmental hazards at the World Trade Center site and their consistency with asbestos measures used by EPA Region VIII in Libby, MT.** *[emphasis added]*
>
> "When the agency uses different measures, then people can begin to ascribe motives, so the Administrator prompted us to look into this," according to EPA research chief and science advisor Paul Gilman. "It's hard to have credible decisions without credible data," Gilman adds and notes that enforcement officials are actively supporting the plan in part because of their need to defend environmental forensic techniques in court.
>
> An EPA official adds "this is an effort to make the science better, to put good science out there for the regulated community to use. If it's clear what's expected and companies still ignore validated measures, then there will be less argument about going after those who are out of compliance." The agency's Office of Research & Development is poised to formalize the charter for the new group that will examine the creation, verification and validation of environmental methods and training across the agency.
> . . .
> EPA officials say several flaws in how some measures work in the field . . . have hurt EPA in court even though in the lab the methods were sound. "In certain management scenarios, these methods needed to be refined" to accurately measure what they were intended for, according to one EPA source.
>
> The new group will be co-chaired by Ramona Travato of EPA's Information Office and Region II's William Muszynski. . . .
> . . .
> *[From Inside EPA Environmental Policy Alert, 3/19/03, www.insideepa.com]*

Muszynski's refusal of free electron microscope support from Region 8 day after disaster

This new forum is suspect for the following reason: William Muszynski, Acting Region 2 Administrator at the time of the WTC disaster, will serve as co-chair. A day after the disaster, 9/12/01, Muszynski refused to use the required superior methods for asbestos, even when offered them for free from Region 8. Region 2's Muszynski was less than polite in his refusal, directing the following two sentences to Region 8 in the 9/12/01 conference call:

> **We don't want you fucking cowboys here. The best thing they could do is transfer you to Alaska.**

On April 29, 2003, the White House Press Secretary Ari Fleischer denounced Cuba's reelection to the United Nation's Human Rights Commission, equating it to "putting Al Capone in charge of bank security." He said it raised questions about the United Nations' commitment to human rights:

> Literally just a few moments ago, the United Nations voted to reelect Cuba to the Human Rights Commission. This is a setback for the cause of human rights. Cuba does not

> deserve a seat on the Human Rights Commission. Cuba deserves to be investigated by the Human Rights Commission. . . . Having Cuba serve again on the Human Rights Commission is like putting Al Capone in charge of bank security. It was an inappropriate action that does not serve the cause of human rights in Cuba or at the United Nations.
> . . .
> The Human Rights Commission undermines its own credibility at the United Nations when they allowed Cuba to get reelected.
> . . .
> But it certainly does raise eyebrows and raise questions about the United Nations Human Rights Commission's commitment to human rights.
>
> *[4/29/03, US State Dept., White House Press Secretary Ari Fleischer press briefing, http://usinfo.state.gov]*

The same criticism can be leveled against EPA for appointing Muszynski as a co-chair to investigate why Region 2 did not use better methods to test WTC dust and contaminated air.

This obscene incident (both in words and intent to deny human beings, NYC citizens, the best available) did happen. Although the participants have been ordered never to go "on record" about Muszynski's decision on 9/12/01, nobody will deny it "on record" either. This is a cover up. The government is supposed to be open about its actions and decision making process. There was nothing "deliberative" or "confidential" about the 9/12/01 teleconference that should warrant an edict of silence.

Since I was not a direct participant, the incident has not gotten extensive press coverage, although the LA Times did cite me as an authoritative source in a cleaned-up version:

> 9/4/02
> Cate Jenkins, a senior environmental scientist at the EPA, said the agency refused offers from other EPA branches to provide more sensitive testing equipment the week after the towers' fall. "They were using the equivalent of a magnifying glass when they should have been using an electron microscope," she said. "And now that they have the chance to redeem themselves, the new cleanup plan is using methods that our own studies show fall short. It's grossly inadequate."
> . . .
> [*LA Times, 9/4/02 - A Toxic Legacy Lingers as Cleanup Efforts Fall Short, By Maggie Farley, Los Angeles Times Staff Writer, September 4, 2002, http://www.latimes.com/news/specials/911/la-na-poison4sep04.story?null]*

Past memoranda have addressed Muszynski's 9/12/02 actions with no claim from anyone at EPA that what I described was untrue. My 4/30/02 memo stated:

> 4/30/02
> Region 2 was offered free TEM analyses for bulk dust by EPA Region 8 on September 12, but refused.
>
> EPA's Region 8 in Denver called Region 2 on September 12, a day after the disaster. In

> a conference call, Region 8 offered Region 2 the free use of 30 to 40 TEM and SEM (scanning electron microscope) testing capabilities for WTC dusts. Region 8 had a contract with EMSL Laboratories for the TEM's and SEM's, which were being used to evaluate soils at the Libby, Montana Superfund site. Region 8 was willing to divert its resources to Region 2 to assist after the disaster. Twelve of the TEM/SEM's were close by and could have been in Lower Manhattan in 40 minutes.
>
> Region 2 refused the offer. This is despite the fact that Region 2 had great familiarity with the need and EPA requirements for TEM testing of asbestos, explained below. . . .
> *[Jenkins, 4/30/01]*
>
> _____
>
> This sudden interest by Region 2 in what is being done in Libby is also in marked contrast to Region 2's refusal of assistance from Region 8 personnel on September 12, 2001, one day after the WTC collapse. On that day, Region 8 personnel were told by the Region 2 administrator: "We don't want you fucking cowboys here. The best thing they could do is transfer you to Alaska." . . .*[Jenkins, 10/22/02]*

Muszynski is further compromised as any suitable party for participation on the forum because he has already made official statements in a 10/30/01 press release saying that EPA testing shows there are no harmful levels of contaminants. Thus, he risks considerable liability serving as co-chair of any "forum" that finds that the methods Region 2 used were inappropriate. The following is a quotation of Muszynski in an EPA press release, still posted on the EPA website:

> "We continue to closely monitor air quality and other environmental conditions in and around ground zero," said William J. Muszynski, EPA Acting Regional Administrator. "While we have fortunately not found levels of contaminants that pose a significant health risk to the general public, our efforts to monitor the area and keep the public informed of our findings have not waned. We welcome all concerned members of the public to our lower Manhattan offices to review the information we've gathered and to visit our Web site."
> . . .
> *[EPA Region 2 press release, 10/30/01, www.epa.gov]*

N: EPA BUILDING IN NYC – EARLY SECRET ASBESTOS ABATEMENT

While EPA was recommending do-it-yourself cleanups for even the most heavily contaminated buildings without even paper dust masks, assuring citizens there were no hazards if they followed the NYC DOH guidelines, EPA secretly had its own building professionally abated for asbestos less than a week after the disaster. In Section E on cleaning up after 9/11, it was documented that EPA never told citizens that they should use professional abatement, even if there were heavy layers of WTC dust.

> Region 2 fiddled while Manhattan burned, safe and secure in their ultraclean offices, never telling of the need, never warning anyone.

What is new, not covered by previous memoranda, are two additional contemporaneous news articles discovered while researching this report that shed more light on the incident.

EPA excuse that rescue workers responsible for the contamination at 290 Broadway

EPA offered the following excuse for professionally abating their building: They feared that rescue workers had tracked in WTC dust. There are problems with this argument. First, it is doubtful that the rescue workers went to the EPA building at 290 Broadway. If they had, any asbestos that was on their shoes or clothing would have fallen off by the time they got there. EPA was saying that this was not a contaminated part of the city.

There is also nowhere in the news or other advisories from EPA or NYC officials warning that citizens should take precautions when going back to their homes or offices north of lower Manhattan or to the other boroughs after 9/11, because they might be carrying WTC dust. There are also no advisories for citizens or others to test their buildings or homes for asbestos that they may have carried back on their clothes, or to professionally abate them. For EPA to claim that there were some kind of very unique circumstances where rescue workers carried WTC dust to their building alone at 290 Broadway is highly contradictory.

Next, EPA did not just HEPA vacuum its lobby, or just wet wipe the lobby. They had their whole building systematically cleaned. All EPA personnel were displaced from the building during this cleaning process for a week. This was a major operation.

The second flaw in the explanation offered by EPA is this: EPA found asbestos in the dust outside their building as well as in the lobby. This means the most logical source of the asbestos would be the original collapse of the WTC, not the non-existent rescue workers. Any dust from rescue workers from the Ground Zero area which got deposited outside of the 290 Broadway

building would have quickly mixed with other dust on the street and be diluted and undetectable. If asbestos were found in the dust outside on the sidewalks and street as well as the lobby, then it came from the WTC itself, not rescue workers.

EPA abated its building based on positive dust tests, but negative air tests. EPA has denied citizens any indoor dust testing during the free cleanup program, saying risks are only related to air measurements, and dust testing is irrelevant.

The only positive tests EPA had for asbestos at 290 Broadway were in the settled dusts, not in the air. The air tests were negative for any asbestos.

EPA has repeatedly claimed that measurements of settled dust were irrelevant to any estimation of risk. Even after intensive lobbying by citizens and scientists, EPA still denied citizens the right to test settled dusts on surfaces in their apartments during EPA's voluntary residential cleanup program. EPA will only test for asbestos in the air.

In complete contradiction, at its own building, EPA had surface dust testing as well as air test. They gave greater credence to the results of the dust tests than the air tests. It was on the basis of the dust tests, not air tests, that EPA abated its building.

EPA used a more sophisticated test method for dusts at their building, electron microscopy. EPA denied this testing for the rest of Manhattan, even when it was offered for free.

Furthermore, EPA used a more sophisticated test method for the dusts at their building (both inside and out). EPA used transmission electron microscopy (TEM) for the dusts. EPA only offered the antiquated light microscope testing (PLM) for outdoor dusts for the rest of Manhattan. (EPA did test outdoor dust, but not indoor dusts.) The sophisticated TEM tests at the EPA building were positive, but the PLM tests were negative.

On the basis of positive results from a test denied to the rest of Manhattan, EPA abated its own building. The test EPA used for the rest of Manhattan, PLM, was negative for the EPA building.

Section L discussed how EPA Region 2 even refused the offer of free TEM dust testing capabilities from Region 8 on 9/12/01, just two days before the exact same test for dusts was used at its own building. Region 2 insisted on using only PLM testing for asbestos for the rest of Manhattan, which uniformly gave false negative results. Even for its own building at 290 Broadway, PLM testing of dusts gave negative results.

EPA buys its employees respirators

Another new fact that came to light is a 10/19/01 article, where EPA admitted buying respirators for its employees. At the same time, EPA was telling the common citizens that they did not even need a drugstore dust mask while cleaning up their apartments and offices covered with 6 inch layers of WTC dust, because EPA was instructing the citizens to follow the NYC DOH do-it-yourself guidelines which said as much very explicitly.

Press accounts and other documentation of Region 2 building special abatement

9/15/01

Heavy rains and shifting winds Friday reduced the smoke and burning odors that had plagued large portions of the metropolitan area this week, and on Friday officials released the results of air tests conducted Thursday that showed no evidence of any airborne asbestos or other harmful contaminants outside of lower Manhattan.

. . .

In lower Manhattan, the U.S. Environmental Protection Agency, tapping emergency cleanup funds under the federal Superfund program, has launched an elaborate air testing program that includes six new monitoring stations and a high-tech portable unit that will be parked close to the blast site.

Dust samples taken at the site have shown relatively high levels of asbestos, a carcinogen. EPA spokeswoman Bonnie Bellow said Friday that air tests Thursday in two federal buildings in lower Manhattan - 290 Broadway and 26 Federal Plaza - did find airborne asbestos, but that none of the samples exceeded one-tenth of the maximum level allowed in workplaces by the Occupational Safety and Health Administration.

"There's nothing at this point that indicates that business can't resume" in the Wall Street area on Monday as scheduled, she added.

. . .

[Tests: Dust Not a Danger Here, Dan Fagin, Newsday, 9/15/01, http://www.nynewsday.com/templates/misc/printstory.jsp?slug=ny%2Dlidust152367598sep15&section=%2F]

10/19/01

Even as they were reassuring the public, EPA officials distributed respirators late last week to their own employees in the Federal Building. The handouts came in response to complaints from the employees of terrible air quality in the building, a few blocks from the Trade Center site.

EPA spokeswoman Mary Helen Cervantes said the masks were distributed for the voluntary use of those employees who might have respiratory ailments or who feel some temporary discomfort from the air.

. . .

[Asbestos Higher in Newer Test, 10/9/01, by Juan Gonzalez, NY Daily News]

1/18/02

After the World Trade Center attacks, the EPA told residents near ground zero to clean their apartments with wet rags and mops. At the same time, the EPA had its downtown offices professionally cleaned for hazardous materials.

. . .

Reports that the EPA's Manhattan offices had been professionally cleaned came out in a Dec. 19 conference call . . . for the EPA's regional and national asbestos coordinators, said Cate Jenkins, a senior chemist in the EPA's Hazardous Waste Identification Division. Walter Mugdan, the EPA's counsel for Region 2, told listeners, including Jenkins, that the offices had been cleaned professionally for hazardous materials.

. . .

Mary Helen Cervantes, Region 2 spokeswoman, said the agency cleaned only the office lobbies with high-efficiency vacuum trucks. Standard janitorial workers cleaned the upper floors with standard wet mops, she said.

. . .

[House Member Questions EPA Office Cleanup, by Christine Houghney, Washington Post, 1/18/02]

1/17/02

Calling into question the integrity of the Environmental Protection Agency's (EPA) actions in lower Manhattan since the World Trade Center attacks, Rep. Nadler exposed a gross disparity in how the EPA has responded to the aftermath of the 9/11 attacks compared with other instances of hazardous materials contamination around the country.

. . .

Rep. Nadler charged that the EPA has abrogated its responsibility to protect public health by proclaiming lower Manhattan "safe" without comprehensive data to support that statement. And the Congressman revealed that the EPA had its own office building at 290 Broadway extensively tested and properly cleaned, in stark contrast to EPA directives which told Manhattan residents to follow NYC Department of Health (NYCDOH) guidelines that advise cleaning with "wet rags."

. . .

Congressman Nadler also revealed today that the Federal buildings at 290 Broadway and 26 Federal Plaza were tested inside and outside for high levels of hazardous materials and, when some were found, the areas were cleaned (HEPA vacuumed) by properly trained personnel. Some sources have also indicated that even greater cleanup measures were taken.

However, even when the EPA received test results from a study commissioned by the Task Force that indicated serious levels of asbestos and other materials inside downtown apartments, the EPA continued to guide residents to the NYC Department of Health (NYCDOH) for direction. The NYCDOH directed residents who are the same distance away from Ground Zero as the Federal buildings, to clean asbestos-laden dust "with wet rags and mops" or "wet brooms."

. . .

"We must ask why is what the EPA says is good enough for New York residents not

good enough for the EPA itself? Either the cleanup measures taken at the EPA office were necessary to protect its workers or the EPA wasted tax-payer dollars on an unnecessary cleanup," stated Congressman Nadler.

. . .

[Nadler Exposes Dramatic EPA Double-Standards and Mishandling of Hazardous Materials Testing and Removal in Downtown Manhattan Residences, 1/17/02, http://www.house.gov/nadler/press.htm]

5/9/02

But Ms. Jenkins and other critics of her agency's performance have said that one of the EPA's failings was its unwillingness to urge New York to use the most-up-to-date method of asbestos testing -- a method employing electron microscopes that the EPA has used elsewhere. The city instead advised building owners to use only an older technique, in which testers search for contaminants using polarized-light microscopes that work much like ones used in high-school chemistry labs. Electron microscopes, used with computers, can detect asbestos fibers that light scopes don't reveal.

The EPA's experience with its own New York building illustrated the distinction. Just days after Sept. 11, EPA officials in lower Manhattan had their building lobby at 290 Broadway decontaminated after tests using an electron scope turned up particles of asbestos. Tests by a light scope had failed to turn up anything.

EPA spokeswoman Bonnie Bellow said in an interview that the agency's testing of its lobby is irrelevant. Officials decided to do a thorough cleanup regardless of test results because they feared rescue workers had tracked in asbestos-laden dust, she added.

. . .

[AFTERMATH OF TERROR, Bureaucratic Buck-Passing Delayed Asbestos Cleanup After 9/11 Attacks, By JIM CARLTON, 5/9/02, THE WALL STREET JOURNAL]

The following is from the Stratus Corporation report on sampling efforts at 290 Broadway, the EPA building in Manhattan.

10/5/01

This report covers the work performed at the Federal Building located at 290 Broadway in New York, New York. These samples were being collected after the tragic events of 11 September 2001, which concluded with the collapse of the World Trade Center Towers. Since asbestos products were known to be present within the towers, it was feared that asbestos debris may have traveled out from the disaster site, and as such may pose a threat of asbestos contamination in the building.

Summary:

On 13 September 2001, air sampling was performed in the building by Phase Contrast Microscopy (PCM), and by Transmission Electron Microscopy (TEM). All of the PCM results were less than 0.01 fibers per cubic centimeter (f/cc), and all of the TEM sample results were No Asbestos Structures Detected (NSD). On 14 September 2001 Stratus Corporation was directed to collect two TEM air samples, and "wipe" samples inside and outside the building lobby, as well as to collect some bulk samples from WAC filters.

These samples were collected to determine if asbestos fibers are now present within the dust around the area. After consulting with the laboratory, it was decided that the following types of samples would be collected:

. . .

On 14 September 2001, two dust samples were collected outside the building entrance, and three samples were collected inside the lobby. The initial TEM qualitative analysis did find chrysotile asbestos to be present in the dust at all locations inside and outside the building.

On 14 September 2001, two tape samples were collected outside the building entrance, and three samples were collected inside the lobby. No asbestos was detected in any of these three samples by PLM qualitative analysis, or by TEM qualitative analysis.

On 14 September 2001, three samples were collected from the HVAC filters. One sample was collected from AC-1, one sample was collected from AC-32, and one sample was collected from AC-31. No asbestos was detected in any of these three samples by PLM qualitative analysis, or by TEM qualitative analysis.

One of the two TEM air samples collected on 14 September 2001, simultaneous to the "wipe" sampling both yielded results of No Asbestos Structures Detected (NSD). The other sample did detect asbestos, and was collected inside the lobby, by the West wall.

Additionally to sampling at this building, Stratus performed sampling at several other GSA buildings around the area. One of these buildings which was sampled is the federal building at 201 Varick Street. This building is located North of the disaster site, many blocks further away then all of the other buildings. 201 Varick Street is just over mile one North of the disaster site. 290 Broadway is approximately 3/8 of a mile North East of the disaster site All initial sampling at the federal building located at 201 Varick Street was negative for the presence of asbestos with the exception of one of three vacuum samples collected outside the building. Since this building appears to have been unaffected by the disaster, in terms of asbestos, it will be used as a control, by which to compare other readings.

After the discovery of asbestos in the lobby of the building, the EPA informed the building management, that the EPA would be cleaning the lobby areas, of all the buildings in the area. Additionally, building cleaning personnel also began performing cleaning inside the building lobbies.

. . .

Conclusion

The disaster which befell the World Trade Center, sampling was performed to see if there may have been any effect on 290 Broadway due to asbestos materials believed to have been in the towers which collapsed. Initial air sampling results were clean, but samples of the dust inside, and outside the lobby indicated that asbestos fibers were present in the dust. According to the building management, EPA officials, cleaned the lobbies of all building in the area, and building maintenance personnel, also performed cleaning operations after these samples were collected. Additional air sampling was performed for three days, from 16 September to 19 September 2001, with samples running around the clock for the first two days. With the exception of 3 samples, all TEM samples yielded results of No Structures Detected. Of the other three samples two were overloaded samples which had qualitative scans performed on them. These scans revealed no asbestos structures in those samples. The one remaining sample did find an

asbestos structure, and was collected outside the building entrance. The reading on this sample was 25 structures per millimeter squared, which is less than the AHERA clearance criteria of 70 structures per millimeter squared. On 27 September 2001, an additional set of PCM, and TEM air samples was collected. All PCM samples were below 0.01 f/cc, and all TEM samples in this batch yielded results of No Structures Detected. All air sample results collected between 14 September, and 19 September 2001, as well as the additional samples collected on 27 September, indicated normal air samples results for asbestos that would be considered safe to occupy the building.

. . .

[Asbestos Emergency Monitoring Report at 290 Broadway after the World Trade Center Disaster, Final Report, 10/5/01, Stratus Corporation, 17 North Street, Tarrytown, New York 10591. Made available from an EPA response to a FOIA request provided to the NY Environmental Law and Justice Project]

The following is from my 12/19/01 memorandum prepared after a meeting of the same day in which Walter Mugdan from Region 2 described the abatement at the 290 Broadway building. Also included is my memoranda of 4/30/01 documenting the abatement of 290 Broadway. This incident was also discussed in my 1/11/02 and 3/11/02 memoranda, not abstracte below.

4/30/02

On the basis of positive TEM results, but negative PLM results on the same samples, Region 2 had its own building abated for asbestos after the WTC collapse

EPA's Region 2 had positive results from sensitive TEM testing for its own building at 290 Broadway in Manhattan, and on this basis decided to abate for asbestos. The samples were taken on September 14, and Region 2 would have had the results by September 15 *[or perhaps as early as 9/14/01]* . The PLM tests on the same samples were negative. See the table in an earlier section. In addition, all of the other tests were negative, with the exception of one air test that Region 2 dismissed as being below levels of concern.

But for the fact that Region 2 had the positive results of the more sensitive TEM method for dusts (which were negative by PLM), it would have taken no action to clean its building, or clean the lobbies of the other federal buildings in Manhattan with HEPA vacuum trucks. The Region 2 building was cleaned using wet-wiping methods among others. EPA employees were "displaced" for a week (employees evacuated from their offices) during these unusual cleaning operations.

Region 2 is reportedly offering as a defense that it was GSA who made the decision to use sensitive TEM tests on settled dusts in their building, not they. But it was EPA who acted upon the results, allowing its building to be cleaned with the unusual procedures, and taking upon itself the task of cleaning the lobbies of the other federal office buildings in the area. The following are quotes from the Stratus report, the GSA contractor, prepared on October 5, 2001.

> After the discovery of asbestos in the lobby of the building, the EPA informed the building management, that the EPA would be cleaning the lobby areas, of all the buildings in the
> Additionally, building cleaning personnel also began performing cleaning inside the building lobbies.

Region 2 was also reminded at the time by the very laboratory data sheets showing the positive TEM results for its building that EPA required the use of TEM. At the bottom of every table giving the results of the analyses for the bulk dust analyses on the 290 Broadway building, SciLabs included the following statement, reminding its clients of the obligations under EPA guidance and NY State regulations to perform TEM for both floor covering and similar materials, and that TEM was the appropriate method:

> Note: PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing in New York State (see also EPA Advisory for floor tile, FR 59, 146, 38970, 8/1/94).

It is interesting and telling that Region 2 withheld the testing data on its building when responding to a 9/21/01 Freedom of Information Act (FOIA) request from the New York Environmental Law and Justice Project (NYELJP). The testing at 290 Broadway would have been responsive, since the FOIA requested all documents meeting the following description:

> [A]ll monitoring data, studies and reports of air, dust, bulk (including but not limited to hazardous materials and water samples) taken from September 11, 2001 to present in response to the World Trade Center disaster (including but not limited to lower Manhattan and Staten Island land fills).

It is also interesting and telling that Region 2 omitted the fact that TEM testing of dusts was performed at its own building in a February 22, 2002 letter from EPA Administrator Whitman to Congressman Nadler. Ms. Whitman was explaining both the testing that had been performed at Region 2's offices in Manhattan, as well as the asbestos abatement which took place. In an attachment to her letter, the dust testing was "incorrectly" described as being only by the PLM method. In fact, both methods were used, TEM and PLM.

In 1998, Region 2 used TEM extensively for assessing the cleanup of another federal building

Region 2 is reportedly offering the excuse of confusion and panic after the collapse of the WTC for only using PLM testing, instead of the required TEM testing of dusts. But this argument has no merit for the following reason:

Bob Fitzpatrick, the Region 2 Asbestos Coordinator, was directly involved in the oversight of an asbestos abatement for the INS at 26 Federal Plaza during the 1998 time period, which extensively used TEM testing of dusts. After the WTC disaster, Bob Fitzpatrick was and is the Region 2 Asbestos Coordinator, responsible for the evaluation and oversight of asbestos abatement and control. Thus, Region 2 cannot claim to have no institutional knowledge of the need or requirements for TEM testing of bulk dusts. It is not as though they had to research the issue for the first time.

The following describes the 1998 abatement: Roofing work had resulted in the dropping of asbestos insulation onto the suspended ceiling tiles on the 16th floor at 26 Federal Plaza in Manhattan, the offices of the Immigration and Naturalization Service (INS). The General Service Administration hired an asbestos abatement firm who initially did a

poor job, resulting in increased contamination of the offices. The INS requested that Region 2 as well as the Public Health Service (PHS) help oversee additional asbestos abatement.

On behalf of the INS, both Region 2 and the PHS demanded, and got, from 4000 to 5000 TEM tests of dusts from just the one floor of this office building. The following table compares Region 2's dust testing after the WTC with the dust testing Region 2 required for a single floor of an office building. It is obvious that additional costs were not the reason for not using TEM for dusts after the WTC disaster.

EPA Region 2 Settled Dust Testing Requirements, Comparison of Two Abatements			
	Asbestos Test Method	Number of Samples	Estimated Cost to Taxpayer ($10-20 per PLM, $25-50 per TEM)
Single floor of office building, 26 Federal Plaza, 1998	TEM	4000 to 5000	$100,000 - $250,000
Lower Manhattan after WTC collapse	PLM	about 250	$2,500 - $5,000

. . .
By the first of October, EPA also had the results of an independent study which showed that the majority of the asbestos in WTC fallout could not be detected by standard microscope techniques such as PLM. The HP Environmental Report found that 95 to 96% of the asbestos fibers were too thin to be detected by PLM. This should have been an additional alert to Region 2 for the need of TEM dust testing. . . . *[Jenkins, 4/30/02]*

12/19/01

First, the EPA found no asbestos in any of WTC fallout samples outdoors that was over 1% north of Warren St. As a result, EPA told the press and everyone that the only contaminated areas were below Warren St. and West of Broadway, the "zone of contamination." Next, EPA referred everyone to the NYC Department of Health (NYC DOH) cleanup recommendations inside this same "zone of contamination" south of Warren. These are the controversial recommendations which do not even recommend HEPA respirators, which just say "avoid breathing the dust" while you mop up the asbestos.

This is what happened next: EPA's offices are at 290 Broadway, which is 2 blocks north of Warren St., outside the "zone of contamination." Even though EPA said there was no asbestos over 1% up this far north at its offices, and that it was safe, EPA had its own offices cleaned by certified asbestos abatement contractors. At taxpayer expense.
. . . *[Jenkins, 12/19/01]*

O: LIBBY SUPERFUND SITE – COMPARISON TO WTC TESTING AND CLEANUP

"The effort was prompted by concerns following Region II's investigation of environmental hazards at the World Trade Center site and their consistency with asbestos measures used by EPA Region VIII in Libby, MT." ***[From Inside EPA Environmental Policy Alert, 3/19/03]***

"What additional actions, if any, should EPA take to improve its response and recovery efforts in the WTC area related to ambient and indoor air quality? Are EPA's current indoor air efforts sufficient? Newspaper articles and some "experts" have raised questions about the adequacy of the clean-up plans, and the scope of the project. . . ." ***[1/27/03 EPA IG report]***

EPA is sensitive about comparisons of the asbestos contamination levels inside homes at the Libby, MT Superfund site with asbestos levels inside apartments and offices in NYC after the WTC collapse. They are sensitive about the disparity between the test methods used at Libby compared to after the WTC as well, and are sensitive about the fact that NYC citizens are not getting as good a cleanup as residents of Libby, MT.

EPA does not like having it known that they are treating one community more favorably than another. EPA particularly does not like the country to know that victims of 9/11 are the ones that are not being given as good treatment as another town in the U.S.

WTC and Libby are being cleaned up under the same statutory authority, the NCP

Prior to 12/20/01, EPA was actively testing and abating Libby homes for asbestos under the authority of the National Contingency Plan (NCP). This was before Libby became a Superfund site on 12/20/01. In Libby, under the NCP authority alone, not under Superfund, EPA had even demolished one home and rebuilt it, because it was impossible to get rid of the asbestos contamination, even with replacement of carpets, upholstered furniture, and professional abatement. When Libby became a Superfund site on 12/20/01, the only difference was eligibility for special funding from industry sources for the cleanup. There was no change in the way the Libby homes were being cleaned, or even in the EPA Region 8 personnel who were in charge of the site.

EPA is also testing and cleaning up NYC under the NCP, as explained in greater detail in Section V. When FEMA activated Emergency Support Function #10 for the WTC, EPA became

involved and automatically invoked the NCP for testing and the cleanup.

The NCP is one of a group of statutory authorities which has been rolled into the Comprehensive Environmental Response and Liability Act (CERCLA). CERCLA includes, but is not limited to, Superfund. It also includes the original statute, the NCP, which was enacted long before CERCLA.

Thus, there should not be any differences between the testing done at Libby and for the WTC. There should not be any differences in the degree to which homes are cleaned up in Libby compared to those in NYC after the WTC. But there has been. New Yorkers have been treated very poorly compared to the residents in Libby, MT. It is true that environmental justice was a long time in coming to Libby. However, the past inequities in Libby are not a justification for repeating the transgression in NYC.

EPA responses to comparisons between the WTC and Libby

The "Q's & A's for Asbestos" document explanations

In a widely circulated document (below), EPA gave reasons for the inferior cleanup and testing for residents and workers in NYC, compared to residents at the Libby, MT site.

> Q's & A's for Asbestos and Vermiculite, (March 26, 2003)
> . . .
> Did the World Trade Center (WTC) have any vermiculite insulation?
>
> Previous answers have been no but Monokote was used and then later sprayed on . . .
> . . .
> What is the difference between the asbestos exposures for Libby versus the WTC?
>
> Current data indicates that the WTC situation poses short-term exposure (e.g., one year) to low levels of contamination via very few pathways (e.g., air, dust). EPA has collected and analyzed over 9900 samples for airborne asbestos in lower Manhattan, and of these, only 22 samples were above the standard (11 of these were collected prior to September 30; the other 11 were collected on October 9, November 27, December 27, January 14, February 5, February 11, March 9, March 29, March 30, April 2 and May 25).
>
> In contrast, Libby presents long-term exposure to high levels of asbestos contamination by many pathways, with confirmed public health impacts. Libby is being cleaned up under Superfund authority. The WTC is NOT a Superfund site, and is being addressed via FEMA authority.
>
> How could EPA remove contaminated insulation in Libby and declare NYC safe without sampling indoors?
>
> EPA's actions in Libby are based on the results of the ATSDR public health screening

> and the other unique multiple exposure factors at Libby. For the WTC, EPA is working with City, State and Federal partners to address the continuing concerns of residents and workers in NYC, even though sample results have not indicated significant problems associated with the WTC since the fires were extinguished.
> . . .
> *[Q's & A's for Asbestos and Vermiculite, 3/26/03 - Possibly a draft, although not labeled as such. There is no new document with the title "Q's & A's for Asbestos and Vermiculite" posted at EPA's new web page for vermiculite information at http://www.epa.gov/asbestos/verm.html . The document quoted above may still be a work in progress. Source of document members of the EPA work group on public communications on vermiculite hazards, 4/17/03]*

The above is disingenuous and a misrepresentation of the facts.

The "Q's and A's of Vermiculite" incorrectly claims the WTC is being cleaned up under the FEMA authority, and Libby under the Superfund authority. Libby began the actual physical cleanup and testing many years ago under the NCP authority alone. The WTC is also being tested and cleaned up under the NCP/CERCLA authority, as explained earlier in this section, as well as in greater detail in Section V.

EPA's claim, above, that air levels after the WTC collapse showed no hazards is false, and addressed in other sections of this report. Briefly, until recently, EPA had only tested outdoors, and not indoors in the confined spaces that lead to much higher asbestos concentrations. Furthermore, other parts of EPA have now officially disowned any claim that the AHERA TEM clearance level of 70 s/mm^2 (or 0.022 s/cc) is a safety standard. EPA had made the claim of safety after the WTC based solely on this AHERA TEM clearance level. The safety standard for residents in Libby is much, much lower than this AHERA TEM clearance level, or even the detection limit of the air test EPA used after the WTC disaster.

The "Q's and A's of Vermiculite" asks the interesting question of how EPA could have declared NYC safe without sampling indoors. In Libby, they did test indoors. This report is in part an attempt to answer that question by documenting the actions and forces which led to EPA making such unsupported safety declarations.

The "Q's and A's of Vermiculite" are incorrect in claiming Libby represents exposures to higher levels of asbestos. It is true the exposure periods have been longer. However, EPA is making very limited progress in preventing the exposures for being of equally long duration in NYC. Cleanups are only voluntary, not systematic. They are also fewer and farther between, and not as rigorous in NYC compared to Libby. Much more needs to be done after the WTC than is currently planned by EPA.

EPA forum to prevent future testing disparities such as Libby *versus* the WTC

Section M also discussed the new forum that EPA convened to attempt some resolution of the difference in test methods used for Libby compared to the WTC. A press account of this new forum states the following:

> 3/19/03
> EPA OFFICES BEGIN EFFORT TO ENSURE CONSISTENT ANALYTIC METHODS
>
> With backing from top agency enforcement officials, EPA's research office has begun an initiative to ensure the uniformity of the agency's analytical methods across regions and program offices.
>
> The new Forum on Environmental Measures is likely to enhance the credibility and defensibility of EPA assessments of environmental conditions in court, sources say. As a result, it is being strongly endorsed by EPA enforcement chief J.P. Suarez, in part because it would enhance the agency's legal clout and standing with the regulated community.
>
> **The effort was prompted by concerns following Region II's investigation of environmental hazards at the World Trade Center site and their consistency with asbestos measures used by EPA Region VIII in Libby, MT.** *[emphasis added]*
> **. . .**
> *[From Inside EPA Environmental Policy Alert, 3/19/03, www.insideepa.com]*

Strong advocacy required to get action in Libby, just as after the WTC

EPA would never have agreed to even the limited indoor air testing and sporadic voluntary cleanups if it were not for the scientists, the press, citizens, and locally elected officials who had no qualms about publically criticizing EPA and NYC officials in their advocacy for better testing and a free indoor cleanup. Realize that by reversing course and testing indoor air and performing residential cleanups, EPA and NYC have now laid themselves open to legal liability. They were very reluctant to do so. If they could have gotten by with no public scrutiny and exposure, they would have ignored the WTC contamination, just the same as they did in Libby for so many years..

It was the exact same advocacy that finally resulted in EPA initiating a cleanup in Libby. They knew about the problem in Libby in the early '50's, but did nothing, letting things deteriorate with ever increasing numbers of citizens succumbing to lung cancer and mesothelioma. Please read the EPA IG report on Libby which begins with the following opening paragraph:

> In November 1999, the media ran a series of newspaper articles which reported that miners and their families in the area of Libby, Montana died or became ill from exposure to asbestos contaminated vermiculite ore, which has been mined near Libby since the

1920s. Subsequently, the media reported that Environmental Protection Agency (EPA) officials knew about the exposure to asbestos and the dangers it posed, but did not take any action. Following these articles, EPA officials requested that we conduct this review.
. . .
[Office of Inspector General Report, EPA's Actions Concerning Asbestos-Contaminated Vermiculite in Libby, Montana, 2001-S-7, March 31, 2001, http://www.epa.gov/oigearth/ereading_room/list301/montana.pdf]

Press coverage of comparison of Libby and WTC testing and remediation

1/13/01

Much of the asbestos-tainted vermiculite that spewed from the collapsing World Trade Center was dug from a mine in the Cabinet Mountains above this picturesque Kootenai River town. And in Libby, as in New York, environmental and health officials failed to disclose just how dangerous the mineral could be.
. . .
The company knew it was deadly. But it did not require miners to wear respirators. Federal and state officials knew the dangers, but they looked the other way.

Until, that is, the death toll began to climb. So far, hundreds of miners and their relatives have succumbed to the diseases caused by the asbestos fibers that painfully destroyed their lungs. Hundreds more are clinging to a torturous life, sucking air from portable oxygen bottles. And the federal government says its testing has found signs of the disease in thousands more who have been examined.
. . .
Their findings make suspect many of the absolute statements the government is making in playing down the hazards those living in lower Manhattan face from asbestos.
. . .
"If the risk to the people of Libby is high enough to warrant the imposition of a Superfund designation, why are government agencies just shrugging off the fact that many of the apartments and businesses in lower Manhattan have identical levels of asbestos or higher?" asks Cate Jenkins, a senior chemist in EPA's hazardous waste division.

Little of what the government is doing about the asbestos from the twin towers surprised the people of Libby.

"It's the same damned government babble and indecision that led to half this town being either dead or dying from asbestos," says Les Skramstad, as he watches the news from New York. "You'd think what happened here would have taught the government why it's important not to sweep this asbestos under the rug," says Skramstad, a former miner who is one of four members of his family with asbestosis from the vermiculite.

"Twenty or thirty years from now, when those New Yorkers start falling over dead, some young government bureaucrat will get all choked up apologizing for what the EPA and others didn't do. "That's what they did here."
. . .
[This story syndicated and covered in over 100 newspapers, as well as by the electronic media]

[Mining town in Montana endured the horrors of disease from asbestos, 1/13/02, By Andrew Schneider, St. Louis Post-Dispatch]

1/13/01

No one really knows how many, if any, people might be killed by the asbestos. But a study released three weeks ago by EPA investigators on the health risks to vermiculite miners and their families in Libby, Mont., bodes ominously for what New Yorkers may face.

"The concentrations of asbestos in both settled dusts inside homes in Libby is comparable to the settled dusts inside the buildings in lower Manhattan," Jenkins said.

She and others in the agency are questioning why, if Libby is dangerous enough to be declared a Superfund site, is the EPA shrugging off even higher levels in New York. "It is unfathomable to believe that EPA can stand behind antiquated science when the report on Libby, issued by the same agency, irrefutably documents the validity of the new methods," Jenkins said.

. . .

[This story syndicated and covered in over 100 newspapers, as well as by the electronic media]

[Asbestos Risks Near Ground Zero May Be Far Greater Than Government Reports, By Andrew Schneider, ST. LOUIS POST-DISPATCH, 1/13/02. Updated by the St. Louis Dispatch on its anniversary date, 1/13/03, under a new title, "World trade center attack asbestos health threat" and can be found at www.stltoday.com]

1/10/01

"They are not using good clean-up methods on Lower Manhattan," she said this week. "We have spent a lot of money recovering human remains. Though it is expensive, it's important to honor the living as they have the dead."

. . .

While EPA Administrator Christie Whitman has assured the public that the human health risks from asbestos exposure near Ground Zero are low, Jenkins has noted that sampling in Lower Manhattan apartments has shown concentrations above the agency's action level.

Moreover, indoor dust samples show higher levels of asbestos than similar samples in Libby, but little is being done to protect residents, Jenkins said.

Her latest ammunition is a Dec. 20 report from Chris Weis, an EPA toxicologist working on the Libby cleanup, that states Libby's asbestos contamination poses "an imminent and substantial endangerment to public health."

. . .

Among other data, Weis analyzed dust samples from indoor locations in Libby, which found asbestos in 13 to 25 percent of the locations. "This dust may serve as an on-going source of potential exposure for residents," Weis said.

Jenkins took that information and compared it with a report prepared by environmental

consultants for the Ground Zero Elected Officials Task Force in New York.
. . .
[Ground Zero asbestos like Libby's EPA chemist says New York dust as toxic as that in Montana, 1/10/01, Susan Drumheller, Idaho Spokesman, www.spokesmanreview.com]

1/18/02
Yet another charge has been lodged by Cate Jenkins, an EPA chemist, who has performed a risk assessment study of reported asbestos levels in New York homes, and found the city has a level comparable to that of Libby, Mont., where hundreds of people died of asbestos poisoning from nearby mines.

She cautioned, however, that her analogy to Libby is a projection. It is not based on epidemiological studies, which rely on medical histories to chart the onset of diseases and the conditions that caused them.

"If EPA doesn't call for uniform, proper cleanups in these Manhattan homes, the risks will be very high down the line for people," she said.
. . .
[Some See N.Y. Air as a Hidden Menace: Many believe EPA cited safety too quickly. Pollutants indoors a key worry. By Josh Getlin, LOS ANGELES TIMES, 1/18/02]

1/11/02
Four months ago today, September 11 marked the tragic loss of thousands of lives in an unprecedented terrorist attack on U.S. soil. The event may also be the biggest environmental disaster to ever hit New York City m aybe any densely populated downtown in America. Now, some experts are calling for Ground Zero and surrounding neighborhoods to be designated a federal toxic waste site.
. . .
Cate Jenkins, a chemist at the EPA in the office of solid waste, agrees that the agencies may have ignored some potent health hazards. “I think people really are at risk here, because unless there is thorough and effective cleanup, people are at risk of breathing asbestos fibers, and once they get in their lungs, they never go away.”
. . .
Jenkins compared dust samples drawn from N.Y. apartments in an independent study done by the Ground Zero Task Force with similar samples drawn from houses in Libby, Montana, a small town designated in December 2001 as a Superfund site after a surrounding vermiculite mine released deadly asbestos fibers into the air, allegedly killing hundreds.
. . .
Although there weren’t many samples, says Jenkins, these results suggest that lower Manhattan could be eligible for listing as a Superfund site, the criterion being that its contamination, like Libby’s, poses “an imminent and substantial endangerment to public health.”

For example, one sample of dust from a windowsill in an apartment on Warren Street, 4 blocks away from Ground Zero, had 79,000 fibers per square centimeter of asbestos, some 22 times the highest level found in house dust in the town of Libby, which has just

5,000 residents, she notes.

Considering that Manhattan is so densely populated, and other pollutants are an added concern, its residents may be arguably at greater risk than officials admit, Jenkins believes.

. . .

Paul Bartlett, an environmental scientist with the Center for the Biology of Natural Systems, agrees that some sort of "emergency designation" for the whole area could help insure health and safety, and perhaps institute an effective health-tracking system to follow the area's public health. As it is now, he charges, "the kind of environmental monitoring we're getting from EPA and other agencies doesn't adequately measure contaminants."

. . .

[Yearning to breathe in a toxic zone, Tragic mound, toxic ground, 1/11/02, Francesca Lyman, MSNBC, http://www.msnbc.com/news/686072.asp?0si#BODY]

2/10/02

In memos that leaked out, an EPA chemist criticized the agency for applying less stringent standards to the Trade Center area than to asbestos problems elsewhere.

. . .

[*WTC's Air of Uncertainty - Experts weigh health risks of twin towers fires & dust, 2/10/02, NY Daily News, By PAUL H.B. SHIN and RUSS BUETTNER]*

Early criticism comparing Libby and WTC contamination levels and test methods

Memoranda abstracted below compared both asbestos levels and the disparity in testing methods in residences at the Libby, MT Superfund site and inside buildings in Manhattan after the WTC collapse.

1/11/02

This memorandum compares data for asbestos in settled dusts and air inside residences in the town of Libby, Montana, which is designated as a Superfund site due to this residential contamination, and similar data for the interior of buildings in Lower Manhattan contaminated by fallout from the World Trade Center (WTC).

. . .

EPA data on bulk dusts taken outside buildings in Manhattan. All the analyses performed EPA for Manhattan used the less sensitive PLM method. EPA did not fraction the sample and use electron microscopy techniques in addition to PLM as did the Ground Zero Task Force study above. EPA in its risk assessment for Libby, however, noted that soil samples showing non-detectable asbestos by PLM alone actually had high levels when analyzed by scanning electron microscope (SEM) methods.

. . .

In Libby, Montana, interiors of homes and residential soils have been contaminated with asbestos from an adjacent vermiculite mining operation. Homes have vermiculite insulation in attics, and vermiculite was used for gardening. In addition, there are

numerous waste piles of vermiculite in the area.[61]
. . .
In Lower Manhattan, interiors of residences and offices were contaminated with asbestos, fiberglass, fine particulate matter, and possibly significant concentrations of other toxic materials from the fallout from the implosion of the World Trade Center (WTC).

Tables at the end of this memo provide levels of asbestos in settled dusts and air in two apartments before cleanup from the Ground Zero Task Force Study,[62]
. . .
In order to compare asbestos levels found in Manhattan with that from Libby, the data in the tables is for asbestos fibers longer than 5 µm, width greater than 0.25 µm, and an aspect ration greater than or equal to 3 to 1. This is called "PCM-equivalent asbestos." The data from Libby only includes asbestos levels that are PCM-equivalent. The Ground Zero Task Force Study of WTC contamination provided not only total asbestos levels, but also PCM-equivalent asbestos levels.
. . .
As can be seen from the above tables, the asbestos contamination in Lower Manhattan, up to seven blocks away from Ground Zero, is comparable or higher than that found in Libby, Montana, a designated Superfund site.

Most of the available data for Manhattan is before even a rudimentary cleanup. One particular piece of data, the residue inside an air vent at 105 Duane St., three blocks outside the boundary where EPA said there was any contamination (7 blocks from Ground Zero), is particularly alarming. This air duct sample was taken on December 3, 2001, long after all cleanups that had been thought necessary were completed.
. . . *[Jenkins, 1/11/02]*

2/10/02

Even if testing is done at the low levels associated with asbestos health effects (0.000004 f/mL), there must be human activities or simulated human activities in the same room at the same time of the testing. When testing airborne asbestos levels inside homes in Libby, Montana, the Superfund site, EPA had both stationary air monitors and monitors worn by residents going about their normal daily activities.
. . .
It is alarming that 20% of samples from indoors (or this could be both indoors and outdoors) were over background levels. *[ATSDR study of lower Manhattan after WTC]* Although it was not stated, there could also be more than 20% of the indoor dusts that had detectable levels of asbestos, but which were not over background. At the Libby, Montana Superfund site (see attachment), only 11 to 23% of the indoor dust samples had detectable asbestos from the random homes selected in Phase 1 of the Libby investigation. . . . *[Jenkins, 2/10/02]*

3/11/02

70 s/mm^2 AHERA is higher than levels found at the Libby Superfund site

The 70 s/mm^2 AHERA TEM clearance level is higher than the air levels found inside

homes at the Libby, Montana Superfund site, the air levels that caused Libby to become a Superfund site.

The following table gives the air levels inside residences that resulted in the designation of Libby as a Superfund site. Because most of the inside air samples had non-detectable asbestos, it was necessary to estimate the detection limit of the tests performed at Libby. This estimate was from 0.0001 to 0.0003 f/mL (PCM).

The average level of asbestos inside residences in Libby is 0.0024 f/mL (PCM).

The AHERA 70 s/mm^2 level is equivalent to 0.0095 to 0.019 f/mL (PCM). (See preceding section.)

The AHERA 70 s/mm^2 level is 4 to 8 times higher than the air inside residences at Libby.

COMPARISON OF AHERA 70 s/mm^2 LEVEL WITH LIBBY SUPERFUND SITE			
70 s/mm^2 equivalent low range, Region 2 data	0.0095 f/mL (PCM)	4 times higher than Libby	
70 s/mm^2 equivalent high range, Region 2 data	0.019 f/mL (PCM)	8 times higher than Libby	
AIR LEVELS INSIDE RESIDENCES IN LIBBY, MONTANA			
Average concentration of asbestos in air inside Libby residences**	0.0024 f/mL (PCM)	0.0023 - 0.0024 f/mL (PCM), range	
Air levels during routine activities, samples where asbestos detected.	0.009 f/mL (PCM)	0.003 - 0.036 f/mL (PCM), range	4/10 samples with detectable asbestos
Air levels during active cleaning, samples where asbestos detected.	0.008 f/mL (PCM)	0.007 - 0.010 f/mL (PCM), range	3/17 samples with detectable asbestos
Non-detect samples, both from tests done while routine and active cleaning taking place. Estimated detection limit	0.0002 f/mL (PCM)	0.0001 - 0.0003 f/mL (PCM), range	20/27 samples with NON-detectable asbestos. 27 total samples (10 + 17)

** Calculated as follows: (0.0002)(20/27) + (0.008)(3/27) + (0.009)(4/27) = 0.00237

Source: Table, page 10 of risk assessment, Weis, C. P., Senior Toxicologist/Science Support Coordinator, U.S. EPA (December 20, 2001) Excerpts from: Amphibole mineral fibers in source materials in residential and commercial areas of Libby pose an imminent and substantial endangerment to public health. Posted at: http://www.epa.gov/region8/superfund/libby/riskassess.html

. . .

<u>If asbestos were present at Region 2's detection limits, levels would be higher than the Libby Superfund site</u>

The detection limits of the Region 2 air tests are also higher than or comparable to the air found inside homes at the Libby Superfund site. An earlier section showed that if asbestos were present at the AHERA levels, it would be higher than in homes in Libby.

In other words, even if Region 2 found no asbestos, even testing inside residences with normal activities going on, it would not be able to say that the air was safer than at Libby. See the table below.

COMPARISON OF REGION 2 DETECTION LIMITS WITH LIBBY SUPERFUND SITE		
Higher Reg. 2 detection limits	0.0043 f/mL (PCM)	almost 2 times higher than Libby
Lower Reg. 2 detection limits	0.0011 f/mL (PCM)	about one-half that in Libby
AIR LEVELS INSIDE RESIDENCES IN LIBBY, MONTANA		
Average concentration, Libby residences	0.0024 f/mL (PCM)	0.0023 - 0.0024 f/mL (PCM), range

. . .

Settled dusts in Lower Manhattan had higher asbestos than soils in Libby, MT
Region 2 claims that asbestos levels are "low" in Manhattan dust

The settled dusts in Lower Manhattan tested in the early days after the WTC collapse had higher concentrations of asbestos than outdoor soils in the town of Libby, Montana, the Superfund site.

> Around 35% of the samples of bulk dust taken in Lower Manhattan in the first few days after the collapse exceeded the 1% level.
>
> *[Mugdan, Walter E. (January 25, 2002) Environmental law issues raised by terrorist events. Speech before the NY Bar Association, NYC. Walter Mugdan is Regional Counsel for EPA Region 2.]*

There was a higher percentage of samples that had over 1% asbestos from the WTC than soils in Libby, Montana, the town that is a Superfund site. The concentrations of asbestos, when the asbestos was found, are the same in Libby as in Lower Manhattan. In Libby, soils from yards from residences, etc., are being removed because of the asbestos hazard they pose.

. . .

Region 2 Counsel has claimed that the asbestos concentration in WTC dusts was low and not a health hazard. This directly contradicts the findings of the extensive risk assessment for Libby where the same concentrations, occurring less frequently, were the basis for placing Libby on the Superfund list. . . . *[Jenkins, 3/11/02]*

P: CARPET AND POROUS MATERIAL TESTING AND CLEANING

"Were EPA actions and decisions in regard to evaluating, mitigating, and controlling risks to human health from exposure to indoor air pollutants in the WTC area consistent with applicable statutes, regulations, policies, and guidance?" ***[1/27/03 EPA IG report]***

This section addresses the problem of both testing and cleaning soft porous materials acting as reservoirs for asbestos and other toxic materials, releasing them slowly over time. Soft porous materials include carpet, upholstered furniture, draperies, papers, and other personal items.

EPA recommends dry HEPA vacuuming, unsafe and ineffective

By recommending the NYC DOH do-it-yourself cleanup guidelines, EPA was recommending the use of simple consumer-type dry HEPA vacuum cleaners for carpeting, upholstered furniture, and other soft items. See Section E of this report for details of the NYC DOH cleanup guidelines.

HEPA vacuuming is ineffective in removing asbestos from carpets, fabric, and other soft materials. Even HEPA vacuuming followed by wet extraction (carpet shampooing) is also ineffective. At the Libby Superfund site, Region 8 is replacing all carpeting, upholstered furniture, and other soft items as part of the cleanup, because there are no cost effective cleanup techniques.

EPA published research shows that standard HEPA vacuuming, or even the addition of wet extraction (carpet shampooing) doe not remove enough asbestos. Furthermore, the EPA studies show that HEPA vacuuming and carpet shampooing increases the air concentrations of asbestos:

> A study was conducted to evaluate the potential for asbestos fiber reentrainment during cleaning of carpet contaminated with asbestos. Two types of carpet cleaning equipment were evaluated at two carpet contamination levels. Airborne asbestos concentrations were determined before and during carpet cleaning to evaluate the effect of the cleaning method and contamination loading on fiber reentrainment during carpet cleaning. Overall, airborne asbestos concentrations during carpet cleaning were two to four times greater than concentrations prior to cleaning. The level of asbestos contamination and the type of cleaning method used had no statistically significant effect on the relative increase of airborne asbestos concentrations during carpet cleaning.
> . . .
> 1) to evaluate the effectiveness of a high-efficiency particulate air (HEPA) filtered vacuum cleaner and a HEPA-filtered hot-water extraction cleaner
> . . .

[Kominsky, J. R., and Freyberg, R. W. (1993) Asbestos Fiber Reentrainment During Dry Vacuuming and Wet Cleaning of Asbestos-Contaminated Carpet, EPA Risk Reduction Engineering Laboratory, EPA Publication No. EPA/600/S2-91-004, posted at http://www.epa.gov/nepis/]

The effectiveness of dry-vacuuming and wet-cleaning for the removal of asbestos fibers from carpet was examined, and the potential for fiber reentrainment during carpet cleaning activities was evaluated. Routine carpet cleaning operations were simulated by using high-efficiency particulate air (HEPA) filtered dry vacuum cleaners and HEPA-filtered hot-water extraction cleaners on carpet artificially contaminated with asbestos fibers. Overall, wet-cleaning with a hot water extraction cleaner reduced the level of asbestos contamination in the carpet by approximately 70%. There was no significant change in carpet asbestos concentration after dry-vacuuming. The level of asbestos contamination had no significant effect on the difference between the asbestos concentrations before and after cleaning. Airborne asbestos concentrations were two to four times greater during than before the carpet cleaning activities. Neither the level of asbestos contamination in the carpet nor the type of cleaning method used greatly affected the difference between the airborne asbestos concentration before and during cleaning.

. . .

[Kominsky, J. R., et al. (1991) Evaluation of Two Cleaning Methods for Removal of Asbestos Fibers from Carpet, US EPA Risk Reduction Engineering Laboratory, Cincinnati, OH 45268, EPA Publication No. EPA/600/S2-90/053, posted at http://www.epa.gov/nepis/]

A study was conducted to compare the effectiveness of three cleaning methods for removal of asbestos from contaminated carpet and to determine the airborne asbestos concentrations associated with each. Baseline measurements before cleaning showed an average concentration of 1.6 billion asbestos structures per square foot (s/ft^2) of carpet. The effectiveness of dry vacuuming using cleaners with and without a high-efficiency particulate air filter was compared with that of wet cleaning with a hot-water extraction cleaner. The wet cleaning method reduced the level of asbestos contamination in the carpet by approximately 60%, whereas neither dry cleaning method had any notable effect on the asbestos level. The type of cleaner used had little effect on the difference between the airborne asbestos concentration before and during cleaning.

. . .

[Kominsky, J. R., et al. (1993) Evaluation of Three Cleaning Methods for Removing Asbestos from Carpet: Determination of Airborne Asbestos Concentrations Associated with Each Method, US EPA Risk Reduction Engineering Laboratory, Cincinnati, OH 45268, EPA Publication No. EPA/600/SR-93/155, Posted at http://www.epa.gov/nepis/]

EPA reverses, warning of hazards from carpets/porous materials, recommends disposal

The following are recent statements where EPA acknowledges that there are hazards from asbestos contaminated carpet and other woven materials. As shown later in this section, EPA was well aware of their own studies and other data at the time of 9/11, and should have warned about the hazards of asbestos-laden woven materials and other porous items.

> [unknown date, a few months after 5/8/02]
> EPA, in conjunction with New York City, developed a program to clean and/or test residences in lower Manhattan . . . . Fabric surfaces such as carpets, upholstered furniture and draperies will be cleaned using a HEPA vacuum and a water extraction wet vacuum.
> . . .
> There are two key studies, which were conducted for EPA, which examined the effectiveness of various cleaning methods on carpets impacted by asbestos. The first, Evaluation of Two Cleaning Methods for Removal of Asbestos Fibers from Carpet (1), found that cleaning asbestos- contaminated carpets with a hot-water extraction cleaner was most effective, reducing asbestos levels by approximately 70%. The second study, Evaluation of Three Cleaning Methods for Removing Asbestos from Carpet: Determination of Airborne Asbestos Concentrations Associated with Each Method (2), again found that a hot-water extraction cleaner was most effective, producing a 60% reduction in asbestos levels in contaminated carpets.
> . . .
> However, because of the results of these studies, EPA cannot guarantee to residents that all asbestos fibers, if present, can be removed from fabric items. EPA anticipates that available cleaning methods for fabric items that were significantly impacted by dust or debris may not be sufficient to address the concerns of residents or EPA's concern for people's longterm health.
>
> With this information in mind, EPA recommends that residents consider replacing some or all carpets, upholstered furniture or draperies if their home was impacted by WTC dust or debris.
> . . .
> *[WTC Residential Dust Cleanup Program: Carpets, Upholstered Furniture and Other Fabric Surfaces Fact Sheet, www.epa.gov/wtc/factsheets/fabrics.html]*

<u>12/23/02</u>

> There are two generally accepted sampling methods for measuring asbestos fibers in carpet: ultrasonification (EPA 600/J-93/167) and the “Microvac” method developed by the American Society for Testing and Materials (ASTM D 5755-95). The ultrasonification method is intended to measure total imbedded fibers in the carpet, whereas the Microvac technique is used to capture the readily extractable fraction of fibers that can be re-entrained into the air. Limited studies indicated that asbestos counts by ultrasonification exceed the readily extractable fraction (as measured by the ASTM 5755 Microvac method) by 30 100 fold.
> . . .
> *[letter from Kathleen Callahan, Assistant Regional Administrator, EPA Region 2, to Jenna*

Orkin, resident, Brooklyn Heights, NYC, 12/23/02]

[undated, between 8/02 and 10/11/02 response letter from NYC DOE]
EPA has reviewed the sampling results conducted . . . for the NYC Dept. of Education . . . in Stuyvesant HS during August, 2002.
. . .
The EPA method (EPA-600/J-93/167) to test carpet for asbestos by ultrasonification is intended to determine the total asbestos content imbedded in a carpet and to evaluate the efficiency of carpet cleaning methods. There exists no widely recognized correlation between asbestos concentrations (fibers per unit area) in carpet as measured by ultrasonification and associated air concentrations. Accordingly, it is not feasible to assess the risk posed from asbestos as measured by this method.

Positive ultrasonification results indicate a potential, albeit of unknown magnitude, for asbestos exposure.
. . .
[letter from Mark Maddaloni, Dr. P.H., DABT, EPA Region 2, to NYC Dept. of Education]

12/31/02
[R]egarding your concerns about the EPA guidelines for upholstery in residential units and its application to the seats in the Stuyvesant High School auditorium, EPA has shared these guidelines with the Department of Education in the past. In general, EPA anticipates that available cleaning methods for fabric items that were significantly impacted by dust or debris may not be sufficient to assure that all asbestos fibers can be removed. EPA's recommendation is where people are concerned and feel that there is significant impact to upholstery then they should consider replacement.
. . .
[letter from Kathleen Callahan, Assistant Regional Administrator, EPA Region 2, to Jenna Orkin, resident, Brooklyn Heights, NYC, 12/31/02]

5/03
Residents were advised that retention of porous items was not recommended due to the difficulties associated with cleaning and testing. Residents were given the option of having their possessions: cleaned on the spot so the resident could immediately take possession, cleaned later and left in the apartment, or disposed of by EPA.
. . .
[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, p. 108, http://epa.gov/wtc/confirmation_clean_study.htm]

EPA 110 Liberty St. study proves HEPA vacuuming and shampooing doesn't work

On 6/4/03, EPA released the results of its WTC dust pilot cleaning study at 110 Liberty St. in NYC. This report is discussed in detail in Section G.

The only method EPA used to test porous surfaces like carpeting before and after cleaning was with the ASTM microvacuum sampling method. It would have been much better to have used EPA's ultrasonification extraction method, the accepted EPA method for carpets and porous materials.

Nevertheless, the 110 Liberty St. study showed that there were no significant reductions of asbestos in carpet and other soft materials before and after EPA's elaborate abatement procedures.

In fact, of the 11 apartments where porous surfaces (carpet, etc.) were tested with the ASTM microvacuum method, 4 had some higher levels of asbestos after cleaning than before. That is correct, the concentrations were higher after cleaning. For 3 apartments, the levels were about the same, and for 4 apartments, the levels were lower.

> Pre-cleaning sampling also included the collection of micro vacuum samples from up to six porous surface areas (e.g., carpets, furniture fabric) in twelve of the thirteen residential units, and both commercial units included in the study (Mattress Store, Chiropractor's Office). The samples were collected from a 10 cm x 10 cm area using dedicated, disposable templates which were left in place. Each unit contained a different number of porous surface sample areas, except Unit 4B which did not have any porous surfaces from which to collect a sample. The micro vacuum samples were analyzed for lead and for asbestos (TEM).
> . . .
> *[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, NY New York, NY, 5/03, EPA Region 2, http://epa.gov/wtc/interim_wtc_residental_study2.pdf]*

This EPA study shows that the cleaning methods were ineffective in removing asbestos from porous soft materials and objects. EPA used dry HEPA vacuuming on couches and personal belongings. For carpeting, EPA used dry HEPA vacuuming followed by wet extraction (shampooing).

EPA did not provide any of the actual results of the microvacuum sampling of the soft materials in its report. There was not enough time to obtain them for inclusion in this report.

Criticisms of planned use of ASTM microvacuum method for the 110 Liberty St. study

I criticized EPA's planned use of the ASTM over the EPA ultrasonification method before EPA even started the study:

> 7/30/02
> EPA TRYING TO REVERSE RESULTS OF OWN STUDIES SHOWING HEPA VACUUMING INEFFECTIVE FOR CARPETS
> . . .
> EPA Region 2 announced on its web site that it will do new tests to evaluate HEPA vacuuming for carpets.
>
> This is an attempt to reverse the findings of 2 earlier EPA studies that show asbestos embedded in a carpet will not be removed with a HEPA vacuum cleaner. EPA studies also found that even wet process HEPA vacuum systems (steam or water extraction combined with a HEPA vacuum) will only remove 60% of the asbestos. The abstracts of these EPA studies are included in the references of this memo, and the full studies are available online.
>
> The problem is that EPA will only be testing the carpet after cleaning with the microvacuum sampling method, not EPA's ultrasonification carpet test. Obviously, if a carpet is newly vacuumed, trying to find asbestos by going over the carpet again with a hand-held microvacuum is not going to pick up any significant asbestos. If the carpet is subjected to impacts, like being walked on, played on, and boxes dumped on it, the asbestos will come to the surface again.
>
> Of course, EPA's earlier studies used the ultrasonification test method. The studies showed all types of HEPA vacuuming were ineffective. EPA tested the carpet both before and after a variety of HEPA vacuuming methods. The asbestos was not significantly removed. . . . *[Jenkins, 7/3/02]*

Recent EPA claims to citizens that carpeting will encapsulate asbestos

Recently citizens participating in EPA's voluntary cleanup program have told me that Ben Barry of EPA's Region 2 office has claimed that carpeting will encapsulate asbestos and prevent its future release. I have heard this report from two different groups. There is a press report of Mr. Barry's contention for only one of the occasions, however :

> 5/6/03
> In late February, elevated levels of asbestos were detected in the couple's apartment after it was cleaned and tested by Environmental Protection Agency contractors. In mid-March, the agency sent them a letter they found to be confusing and technical, informing them of the excess asbestos and advising, "You will be contacted by an E.P.A. representative who will discuss these results with you and help you to decide upon a follow up course of action."
> . . .

Lapson and others worry about the possibility of re-contaminating apartments if common areas found to have elevated asbestos are re-cleaned after apartments have already been scoured.

Barry said cross-contamination risks were minimal since the asbestos levels are low to begin with and the complex's new carpeting would trap any harmful fibers.
. . .
[Asbestos found in I.P.N., after E.P.A. cleanup, 5/6-12/03, Elizabeth O'Brien, Downtown Express,, http://www.downtownexpress.com/DE_WEB_02/asbestosfound.html]

Early documentation that HEPA vacuuming ineffective and unsafe

12/7/01
[T]he U.S. Environmental Protection Agency has advised parties returning to residences and homes in lower Manhattan to use these dry-type HEPA vacuums. This advice is by way of EPA's official referral of parties to the New York City Department of Health (NYC DOH) recommendations which mention dry-type HEPA vacuums as being preferable. The NYC DOH recommendations may be found at www.ci.nyc.ny.us/html/doh/html/alerts/wtc3.html.

EPA's advice appears contrary to and in direct conflict with the official EPA studies which found that dry-type HEPA vacuum cleaners do not reduce asbestos contamination in carpets. I am aware of no other scientific evidence to substantiate the conjecture that a dry-type HEPA vacuum cleaner would effectively remove asbestos fibers from carpeting. There will be a need to closely monitor the effectiveness of asbestos removal from carpeting through laboratory testing. . . . *[Jenkins, 12/7/01]*

12/19/01
Predicting air levels if cleanup is inadequate Ai r levels might also be predicted if the cleanup is inadequate. As discussed in my December 6 memorandum, the EPA determined that neither conventional nor HEPA vacuums were capable of removing significant amounts of asbestos from carpet. Only the wet-extraction HEPA vacuums removed the asbestos particles which adhere to the carpeting.8 Even the wet-extraction HEPA vacuums did not remove all of the asbestos, only about 60%.

Thus, the same or similar levels of asbestos could remain in the carpets as their were before the cleanup. After cleanup, the air levels could remain as high as projected in Table 2. The dust in both of the apartments in the Ground Zero Task Force study (Table 2) was not that thick, only a fine dusting where you could still read the writing on papers on a table even in the high exposure building.. This small amount of dust could easily work its way into the carpet and remain. . . . *[Jenkins, 12/19/01]*

1/11/02
Dry-type HEPA vacuums do not remove asbestos from carpets The NYC DOH

recommends dry-type HEPA vacuum cleaners, even though the EPA has found that dry-type HEPA vacuum cleaners simply do not remove the asbestos from the carpeting any better than a regular vacuum cleaner, removing essentially none at all.25 Professional abatement firms recognize that dry HEPA vacuums are ineffective in removing asbestos. There is documentation of at least one certified asbestos abatement firm who removed and disposed of all carpeting which was over padding in common areas in an apartment building near Ground Zero, in recognition of the fact that there was no way to remove the asbestos.26

The same EPA studies also document the fact that even the wet-extraction HEPA vacuum cleaners are inefficient in removing asbestos from carpeting only 60-70%. . . . *[Jenkins, 1/11/02]*

6/9/02

SUBJECT: TESTING CARPET, THE ASBESTOS RESERVOIR

Best test for carpets; EPA ultrasonification method
No consultants needed; only cost is the lab fee
EPA shows HEPA vacuuming does not remove asbestos
EPA and other asbestos dust benchmarks/safety levels

. . .

This memorandum describes EPA's ultrasonification test method for dust in carpets and woven fabrics. This state-of-the-art test gives results as the number of asbestos structures per square centimeter (s/cm^2). The results can then be related to background levels and safety guidelines. A major advantage in this test is that you do not need a consultant or industrial hygienist to take samples.

Carpets and other woven fabrics are reservoirs for asbestos and are a source of continued release. EPA studies show that carpet cannot be decontaminated with any type of HEPA vacuuming, even in combination with water or steam extraction.

There is no reason why EPA should not be offer this superior test to residents during the free testing and cleanup of residences below Canal Street, especially since this is an established EPA method specially designed for carpets.

. . .

The most meaningful asbestos test that a resident can have, whether or not they have a consultant to take samples, is EPA's ultrasonification extraction test for carpeting, draperies, or upholstery fabric. This method was developed specifically for carpeting by EPA's Risk Reduction Laboratory.[63] The method number is EPA 600/J-93/167, the Millette ultrasonication carpet method. Over 100 times the amount of asbestos will be found in carpet using EPA's ultrasonification test, compared to the ASTM microvacuum sampling method.[64]

The ultrasonication extraction test does not require any special equipment, such a micro-vacuum pump, or an air testing pump. Therefore, no industrial hygienist or other consultant needs to be hired to do the sampling. The only cost will be the lab fee. However, this means cutting out at least 16 square inches (100 square centimeters) of carpeting or other fabrics and sending it to the laboratory. See below for ideas on how to take samples without incurring unreasonable replacement costs for carpet, drapery, or upholstery.

An ultrasonication test may be the best way to tell if asbestos is present in a residence or office. Carpeting and upholstered fabric can be tested to see if it needs abatement, or it can be tested after abatement to determine whether it was decontaminated. Hard smooth surfaces may show no asbestos contamination with the ASTM microvacuum method if tested soon after cleaning. But carpeting cannot be cleaned effectively, and will show any residual asbestos.

. . .

The ultrasonication method is not likely to result in an over-count of asbestos fibers due to the separation of bundles of fibers during the sonication procedure. This is particularly true for WTC fallout, which is already finely divided.[65] High impacts, such as foot traffic or children playing with toys on carpets, would certainly result in the breakdown of asbestos fibers that are bundled together into individual asbestos, resulting in an increase in the number of fibers, and also an increase in the hazard.

. . .

ASTM microvacuum method is inadequate for carpets and other woven fabrics

Some argue that testing carpet and fabrics with the hand-held ASTM microvacuum suction pump would be a good enough test, since it would get out the easily releasable asbestos. In this method, carpet and other fabrics are sampled by a hand-held air suction pump. The fabric is essentially vacuumed by the pump. The asbestos is caught on a filter, and then the filter is sent to the lab for testing.

However, this ASTM microvacuum sampling pump is only a first-line test for carpet and other woven fabrics, and is not definitive. The microvacuum pump does not apply any greater suction than a good vacuum cleaner. High impacts, such as a child running or rolling on the carpet, will release much more asbestos than any vacuuming process. The EPA ultrasonification method will extract over 100 times the amount of asbestos from carpet compared to the ASTM microvacuum method. The ultrasonification method is also an official EPA method specific to carpet, and is thus preferred.[66]

NYC APT. BUILDING USES ULTRASONIC CARPET TESTING

The New York Environmental Law and Justice Project[67] obtained carpet samples from one NYC apartment building on Hudson St., near the intersection with Thomas St. The samples were taken on May 29, 2002, over 8 months after the collapse of the WTC. The samples were tested by EPA's ultrasonification method. The results are given in Table 1. The building is 9 blocks north of Ground Zero, and 4 blocks north of Warren St. Warren St. was defined by the New York City Department of Health as the northernmost point of contamination from WTC fallout.

The building does not have central forced air heating and cooling. Heat is by floorboard hot water pipes. Air conditioning is by individual window units. There is forced air circulation in the hallways only. The building is a well maintained with a clean boiler room and basement. As seen in a later section of this memo, these levels are high, indicating a major asbestos release. The pattern of the contamination, roof and lower hallway, is indicative of the asbestos source being the World Trade Center.

. . .

TABLE 1. Hudson St. carpet: levels of asbestos found using EPA's ultrasonification test
Samples taken on May 29, 2002

Building has no forced air heating and cooling to redistribute asbestos from common areas to apartments, or from apartment to apartment.	asbestos structures per square centimeter (s/cm^2)

Carpet from roof, no special cleaning since 9/11. No visible dust on carpet. Indoor-outdoor carpeting on deck on roof.	624,717
Carpet from 1st floor hall, no special cleaning since 9/11. Sample taken 4 to 5 feet from front door. No visible dust or discoloration for different areas of carpet (such as higher dirt levels in high traffic center of carpet).	645,200
Carpet from 1st floor hall by bicycle rack, no special cleaning since 9/11. No visible dust or difference in discoloration between carpet areas.	329,427
Carpet from 10th floor hall, no special cleaning since 9/1. No visible dust or difference in discoloration between carpet areas.	65,202
Carpet from inside 9th floor apartment, mat which had been HEPA vacuumed. (Does not mean that HEPA vacuuming removed asbestos. Probably not that contaminated to begin with, since windows not open, not facing WTC, and no central forced air in building to re-distribute asbestos.)	less than 15,788

. . .

EPA FINDS HEPA VACUUMING DOES NOT REMOVE ASBESTOS FROM CARPETS, AND EPA POLICY ON CONTAMINATED CARPETS

EPA studies show asbestos that is embedded in a carpet will not be removed with a HEPA vacuum cleaner. EPA studies also found that even wet process HEPA vacuum systems (steam or water extraction combined with a HEPA vacuum) will only remove 60% of the asbestos. The abstracts of these EPA studies are included in the endnotes/references, and the full studies are available online.[68] HEPA stands for "high efficiency particulate air filter." A HEPA vacuum does not have more suction power for removing dirt from carpet, it only has an additional filter that does not allow very small particles, including asbestos fibers, to be released in the exhaust.

High impacts such as foot traffic, hitting, or playing on carpet, upholstered furniture, or draperies will release asbestos even if these items were HEPA vacuumed. In addition, asbestos will work its way through the rug backing and settle on the floor or cushioning, which cannot be reached by any kind of vacuum.

Intuitively, if any kind of vacuum really could remove all dust and dirt, then carpeting would always return to its original pristine condition after vacuuming, never getting dirty and needing replacement. There is nothing magic about a HEPA vacuum in its cleaning powers it only has a better filter to reduce emissions.

Regulations and policy on replacing asbestos-contaminated carpet

Neither the EPA regulations under the Asbestos Hazard Emergency Response Act (AHERA), which covers schools, nor the Clean Air Act (CAA) asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) specifically require the removal of asbestos-contaminated carpet. The regulations instead only require cleaning surfaces to background levels, as well as requiring no visible dust. You would need to argue that if you pulled the carpet back and folded it, you could see dust in the fibers along the backing, or on the cushioning or under the cushioning.

However, the U.S. Army Corps of Engineers has guidelines that are clearer on asbestos-contaminated carpet.[69] They specifically require that carpet to be removed if contaminated with any level of asbestos, not just levels over 1%. The only abatement option is removal, not cleaning.

In Libby, Montana, the Superfund site, EPA is requiring that all contaminated residences receive new carpet and upholstered furniture at no expense to the homeowner, because it was determined that asbestos could not be removed by any cost effective process, even HEPA vacuuming with wet extraction. . . . *[Jenkins, 6/9/02]*

Press coverage of carpet contamination issue

8/7/02

High levels of potentially dangerous asbestos - many times above the acceptable federal amount - have been found in carpeting inside the Stuyvesant High School auditorium, angry parents charged yesterday. The asbestos results came from independent tests of the carpet, which were carried out by a consultant for the Stuyvesant Parents Association, parent leaders said. School officials stood on the rug last fall to assure parents the school was safe for their children.

And the students returned to Stuyvesant in October. But after classes ended in June, the carpet was replaced during cleaning and remodeling inside the school. Subsequent tests on the carpet, conducted by engineer Howard Bader, detected asbestos levels of as much as 2.5million structures per square centimeter in one sample. Experts generally consider levels in excess of 100,000 to begin asbestos abatement efforts.

Parents, who have gone to court to force a more aggressive cleanup of the building, have been concerned about air quality at the school just blocks from Ground Zero. "We've learned the hard way that you can't trust them on this issue," said Paul Edwards of the group Concerned Stuyvesant Parents. "They told us everything was okay."

Schools Chancellor Harold Levy's office did not respond to requests for comment on the findings. Asbestos, which can cause cancer, is dangerous only when it is airborne. Inhaling the material can cause chronic lung disease and cancer. The fiber was used as fireproofing in at least 37 floors of the World Trade Center. Air tests conducted by school officials and the Parents Association since September have found no traces of airborne asbestos.

. . .

[Asbestos fear afoot at Stuyvesant, By JOE WILLIAMS, 8/7/02, NY Daily News]

8/8/02

New environmental tests show the upholstery in the Stuyvesant HS auditorium is contaminated with asbestos - as much as 25 times what experts consider acceptable. Some parents expressed alarm because many events were held in the auditorium when students returned last October following the attacks on the Twin Towers.

Stuyvesant Parents Association consultant Howard Bader called the newly discovered level of asbestos "extremely high," and added that it "raises concern that the seats are contaminated." The testing, which was done for the Parents Association, found one sample with 60,000 asbestos structures per centimeter - while another came back with a whopping 2.5 million reading. Experts say a reading of 100,000 requires an emergency

clean-up, while lower levels, such as 60,000, are still a cause for concern. Bader insisted all protocols for asbestos removal should be followed at the school.

Schools Chancellor Harold Levy's office said rugs will be removed and seat upholstery replaced before Stuyvesant reopens next month.

. . .

[ASBESTOS SHOCK ROCKS STUY HS, By CARL CAMPANILE, 8/8/02, NY Post]

9/9/02

But on opening day, several dozen parents stood outside protesting the school's handling of the issue. Paul Edwards, parent of a 17-year-old Stuyvesant student, wasn't planning on sending his son back until the school could answer his lingering safety questions. He and others worried that vents had not been retested and that carpeting and upholstery were still contaminated with asbestos. As a result of their protest, however, Edwards was happy that the department "agreed to remove and replace all carpeting in the building, replace the theatrical curtain in the auditorium and continue discussions."

. . .

[Dusting off Manhattan: A year after 9/11, worries about toxic dust plague residents, 9/9/02, By Francesca Lyman MSNBC, http://www.msnbc.com/news/803400.asp]

Q: ELIGIBILITY BOUNDARY FOR EPA VOLUNTARY CLEANUP PROGRAM

"Newspaper articles and some "experts" have raised questions about the adequacy of the clean-up plans . . . it is limited to south of Canal Street and may not include other areas of potential contamination (e.g., Chinatown, Brooklyn)." ***[1/27/03 EPA IG report]***

There is good evidence that hazardous levels of WTC dust are present beyond the current boundaries EPA set for its voluntary free residential cleanup. The eligibility boundaries are:

> Residents living below Canal, Allen and Pike Streets may ask to have their homes cleaned and tested for airborne asbestos by certified asbestos contractors or they may ask for testing alone under EPA's Lower Manhattan Dust Cleanup Program.
> . . . *[www.epa.gov/wtc]*

Apparently, EPA set its boundaries based on estimates of where the original ground-level tidal wave of dust went. These were based on aerial photographs from police helicopters and satellite images from the USGS.[70] EPA may also be basing its boundaries on its own testing of original WTC dust that was visible, lying on the ground after 9/11.

This section discusses the erroneous basis for EPA's arbitrary cleanup boundaries.

Uneven distribution of asbestos around Ground Zero

EPA claimed that its tests showed that high levels of asbestos in dusts were limited to the immediate Ground Zero area:

> ASBESTOS . . . In Dust
> . . .
> The majority of areas in which EPA has found levels of asbestos above the 1% definition have been in the vicinity of the work zone at the World Trade Center site.
> . . .
> *[EPA website responding to WTC disaster, guidance on standards, approximate date 1-/1/01, http://www.epa.gov/epahome/wtc/activities.htm]*

Contrary to EPA's claim, asbestos and other WTC toxic contaminants were not confined to areas immediately adjacent to Ground Zero.

Appendix 1 of this report provides a chart that plots the concentration of asbestos in WTC fallout on streets as both a function of distance and direction from Ground Zero. This chart functions

almost like a map of the concentrations of asbestos. The data in this chart demonstrates that asbestos is very unevenly distributed, and not in any way confined to, or more concentrated near, Ground Zero.

The leader of a large international team studying the distribution of WTC fallout in Manhattan found that dusts that settled nearer Ground Zero contained the heavier components, such as pulverized concrete and glass. However, the lighter components, those which could remain airborne for longer periods like asbestos, fell to the ground in greater relative concentrations farther away from Ground Zero. This study was published in the journal Environmental Health Perspectives.[71] The data on surface dusts from this study is included in the chart at Appendix 1 of this report.

The following are press quotes from the lead author of the study, Lioy:

> 8/23/02
> "The glass fiber was a surprise to everybody," Lioy said. "It was one of those things that we never anticipated."
>
> The variability of the debris with distance was also a surprise. Samples collected just one block from the World Trade Center, on Cortlandt Street, were composed of pulverized concrete, glass, unburned or partially burned jet fuel, and construction materials. The pH of the material was an astonishing 11.5 - far more alkali than anything the human lung, with a normally acidic pH of about 4.0, would naturally be exposed to or is equipped to handle.
>
> Samples collected on Market Street, near the East River, were less alkali but still a remarkable pH of 9.3. While the heavy concrete content seems to have decreased with distance, the Market Street sample contained more than three times as much chrysotile asbestos - the form that can produce severe lung disease - as did dust close to the World Trade Center. Heavy metal content - such as zinc, strontium, lead and aluminum - also increased with distance. So did potentially toxic organic chemicals, some of which are considered carcinogens, such as PCBs (polychlorinated biphenyls) and PAHs (polycyclic aromatic hydrocarbons).
>
> Fire experts speculate that the area immediately around the World Trade Center got hit with the heaviest substances - the pulverized concrete, steel, office equipment, cars and construction material. But the tremendous heat from the jet-fueled inferno created an updraft that lifted small, lighter particulates and gases up, away from Ground Zero and toward the East River.
> . . .
> *[Ill Winds of 9/11, Little scrutiny for Brooklyn - where attack's toxic smoke drifted, By Laurie Garrett, Newsday, 8/23/02, http://www.newsday.com/templates/misc/printstory.jsp?slug=ny-usplum232835314aug23&section=%2Fnews%2Fnationworld%2Fnation]*

10/29/02

There were thousands of windows in the 110 stories of the twin towers that exploded into invisible, microscopic projectiles. The dust samples contained large amounts of microscopic glass fibers, most of them less than a micron in diameter and more than 75 microns long small enough to pierce human lungs. "The glass fiber was a surprise to everybody," Lioy says. "It was one of those things that we never anticipated."

The team was also surprised to find that the content of the pollution varied based on the distance from the towers. Samples collected one block from the World Trade Center on Cortlandt Street were composed of pulverized concrete, glass, unburned or partially burned jet fuel, and construction materials. Samples collected on Market Street, half mile from the site, contained less concrete but three times more asbestos. Heavy metals like zinc, strontium, lead and aluminum also increased with distance, as well as PCBs.

The area immediately around the World Trade Center got hit with the heaviest substances, like pulverized concrete, steel, office equipment, cars and construction material. But the tremendous heat produced by the jet-fueled inferno created an updraft that lifted lighter pollutants and gases upward, towards the East River. It was a sunny day, so the chemicals in the cloud were affected by strong ultraviolet radiation. Most organic chemicals are altered by UV light, and some are transformed into compounds that are more toxic to human beings, so as the cloud drifted, it became more lethal.
. . .
[Unique and Lethal Pollution From 911, Unknown Country, 10/29/02, http://www.unknowncountry.com/news/?id=2088]

EPA's inadequate testing to determine true contamination boundaries

EPA did not use electron microscope (TEM) analyses of bulk and settled dusts

Section L addressed the problem of not using the EPA recommended TEM electron microscope methods for asbestos on the WTC fallout dust found on city streets. Thus, EPA got too many false negatives for asbestos in WTC dust, and did not realize that the contamination boundaries were farther north, and probably extended to other boroughs like Brooklyn.

High levels of asbestos have been found in WTC dust north of some parts of Canal St. when TEM testing was used by independent investigators. Canal is a diagonal street running from north-west to south-east. Asbestos was found in 2 to 5% concentrations in WTC dust at 150 Franklin St. in Manhattan, about 7 months after 9/11. 150 Franklin St. is just south of the northern portions of Canal St. However, the 150 Franklin St. address is north of the eastern parts of Canal St., and north of Chinatown. This investigation is discussed in greater detail in Section L on TEM testing.

Section L discussed the refusal by Region 2 to use TEM electron microscope testing, even when offered this capability for free by EPA Region 8.

EPA did not test WTC fallout at intermediate distances to establish boundaries

When EPA tested bulk WTC dusts from the streets shortly after 9/11, it only took 3 samples as far north as Chambers St., finding no asbestos. This was inadequate. The next set of samples where EPA tested was not before 35th St. (only 2 samples), and then one sample at 59th St. This is not enough samples, even if EPA's test method had been adequate (TEM electron microscopy instead of PLM light microscope methods).

False EPA claims that the thickness of the dust layer indicates the asbestos content

EPA is basing its boundaries for the free cleanup on visible layers of WTC dust. EPA has always claimed that the heavier the dust layer, the more concentrated the asbestos.

However, EPA's own pilot cleaning study at 110 Liberty street, discussed at length in Section G, disproves EPA's theory. Apartments where EPA itself claimed there was only minimal dust (no visible dust at all except under the baseboard heater) were as contaminated after multiple cleaning efforts as those with visible dust. EPA's own data demonstrated that the concentration of asbestos by wipe sampling in these apartments was not related to whether the dust layer was visible or not.

This means that EPA's criteria for establishing the cleanup boundaries, visible layers of WTC dust outside, are not valid.

It is probable that even if the WTC fallout was initially isolated to a certain geographical area surrounding Ground Zero, the lighter, more aerodynamic components such as asbestos and fiberglass, could become resuspended in the wind and drift to other parts of the city.

Brooklyn

EPA did inadequate testing of WTC dusts in Brooklyn, using only the insensitive light microscope PLM method for dusts. These flawed dust analyses were the basis of EPA's claim of no hazards in Brooklyn, below:

> 9/13/01
> 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.

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

Press accounts close to 9/11 document that papers from the WTC with readable WTC addresses rained down on Brooklyn, as well as dusts. See below..

There are two excellent photographic sources documenting heavy dust fallout in Brooklyn, and there are undoubtedly others. The overhead plume reaching into Brooklyn was photographed by NASA from space, and can be found at the following website: http://www.globalsecurity.org/eye/wtc.htm . There are many additional NASA photographs available from archives.

EPA argued that the plume stayed aloft, and did not drop any dust and debris into Brooklyn. This is false. Photographs showing the ground impact of the dust clouds impinging on Brooklyn may be found at the following web site: www.planetkevin.com .

The following press accounts describe the situation:

9/27/01
More than a dozen documents, including a United States Customs notice of job openings and an aeronautical chart - wind-blown after the collapse of the World Trade Center - have been turned in to police by Brooklyn residents, according to law enforcement sources. The Federal Bureau of Investigation would not comment on anything specific that has been turned over to its investigators by several police precincts.

But FBI spokesman Jim Margolin suggested it is possible that paperwork relevant to the FBI's probe of the Sept. 11 attack is still out there, resting on a rooftop or in someone's yard. "The things we'd be most interested in would be documents concerning the hijackers," he said. Authorities say southerly winds sent an untold amount of debris - mostly paperwork - flying toward Brooklyn after the World Trade Center towers collapsed Sept. 11. One woman in Coney Island reported retrieving a signed business card belonging to someone with a World Trade Center address.
. . .
[AMERICA'S ORDEAL, Collecting the Rain of WTC Paper B'klyn finds could be clues, By Rocco Parascandola Newsday, 9/27/01, http://www.nynewsday.com/templates/misc/printstory.jsp?slug=ny%2Dnyfind272386829sep27&section=%2F]

8/23/02
They call it World Trade Center Cough - the hacking, wheezing, horrible cough that heaves the chests of many who inhaled Ground Zero air after the Sept. 11 terrorist attacks. Scientists and health officials have studied the cough and scoured some neighborhoods of New York City for victims of inhaled Trade Center debris.

But there is a critical flaw, experts say, in all the research, Environmental Protection Agency cleanup programs and federal services related to exposure to World Trade Center debris: The efforts are concentrated on Manhattan, but, except for the area immediately around Ground Zero, the plume did not spread around the borough. It went directly to Brooklyn.

Newsday has obtained high-resolution photographs shot on Sept. 11 by satellites. From these images it is clear that the plume of toxic debris blew from Ground Zero southeast, across the Brooklyn Bridge, through the neighborhoods of Brooklyn Heights, DUMBO (Down Under the Manhattan Bridge Overpass), Cobble Hill, Boerum Hill and Park Slope, across Prospect Park and straight out to Coney Island. Though the plume's density was highest directly over Ground Zero, throughout the day the plume completely obscured the Brooklyn Bridge and neighborhoods out to Prospect Park.

On Sept. 11 the plume never crossed Duane Street, which is below Canal Street, and never moved in a northwesterly direction that might have included significant parts of TriBeCa and SoHo in Manhattan. Further, studies of the debris indicate its toxicity may have actually been higher for some chemicals and asbestos as it crossed the East River, and Brooklyn hospitals report continuing respiratory disease cases.

. . .

"For some reason my assumption was the most affected people were right under the Trade Center. But we all got about as much in Brooklyn," New York City Council member David Yassky said in an interview.

. . .

"There was a film of dust on everything - on cars, stores, everywhere in Brooklyn Heights. If you were there, as I was, you saw several hours of debris rain down on your neighborhood," he said. "When you think about where all the scientific studies and social services have focused, well, I'm stunned. It's kind of amazing that nobody analyzed the plume" before deciding how to focus studies and services.

. . .

"The data is beginning to materialize saying the most important area outside of lower Manhattan was Brooklyn," said environmental scientist Paul Lioy of Rutgers University. Lioy heads a large team of federal and academic scientists that is trying to determine precisely what was in the plume and firesmoke, and where it fell day by day.

"This was a very horrendous air pollution event," Lioy said in an interview. "The tremendous crush of all this material was horrific. You had dust, smoke, fires, fumes, the remnants of those tragic planes. It was a very complex event, unlike anything we or anybody else has ever seen."

. . .

Unfortunately, Lioy writes in a scientific study entitled "Lessons Learned," little is known about the debris that reached Brooklyn because nobody monitored the borough. Dr. Gerald Lombardo, chief of pulmonary care at New York Methodist Hospital, has seen many cases of what he believes to be World Trade Center Cough among Brooklyn residents who do not work in lower Manhattan. "I'm pretty much in touch with all the leading pulmonary programs in New York," Lombard said in an interview, "and I would say that the number of pulmonary visits has just skyrocketed for upper respiratory problems."

In his Park Slope hospital, Lombard insisted, "the number of visits clearly doubled, and that has stayed high. It's not surprising to me that this population will be complaining for some time." Lombard is especially concerned about the microscopic glass exposure,

which, he said, could "mimic the pathophysiology of asbestos disease."

In Brooklyn Heights, the Long Island College Hospital also saw a "huge influx" of respiratory cases, Dr. Tucker Woods, an emergency room physician, said.
. . .
[Ill Winds of 9/11, Little scrutiny for Brooklyn - where attack's toxic smoke drifted, By Laurie Garrett, Newsday, 8/23/02, http://www.newsday.com/templates/misc/printstory.jsp?slug=ny%2Dusplum232835314aug23&section=%2Fnews%2Flocal%2Fnewyork]

Chinatown

There was no reason to exclude Chinatown from the area eligible for EPA's free cleanup program. Chinatown is south of most parts of Canal St. Residents of Chinatown may be less aware of the hazards because of the language barrier, and also financially ill equipped to undertake cleanups on their own behalf. The following is a relevant press story.

5/20/02
Hundreds of people living in Chinatown and on the lower East Side packed a town hall meeting yesterday to complain of post- Sept. 11 respiratory ailments and demand faster federal action to test and clean buildings in their area.

"I've never had nosebleeds before not ev en as a child," said Tima Latt, 50, who lives on Grand St., a few blocks north of the geographic boundary set by federal relief agencies for testing and cleanup. "Everybody is suffering, not just the rich people," said Latt, who spoke at the second town hall meeting held at Public School 124 in two weeks.

The federal Environmental Protection Agency said this month it would test apartments south of Canal St. for asbestos and clean them where necessary. The Federal Emergency Management Agency is considering expanding the boundaries of the defined area for testing, but has not done so.
. . .
"When I put on the air conditioner, white dust and smoke comes out of the vents," said Carmen Velez, 58, who lives the LaGuardia Houses, one block outside the testing/cleanup boundary. "It has the same burned smell we had on Sept. 11."
. . .
[9/11 Cleanup Is Sought For Lower E. Side, By LESLIE CASIMIR, 5/20/02, NY Daily News]

Tunnels and subways

There is a great probability that subway and automotive tunnels are contaminated with WTC dust. Administrator Whitman is quoted as voicing a concern and an intent to test these tunnels.

Apparently, EPA has not performed this needed work, because it has not posted any information on its web site. The following is the 9/16/01 quotation from Whitman:

> 9/16/01
> In the future, *[Administrator Whitman]* said, samples will probably also be taken from the tunnels, such as the Holland and Battery, through which debris has been transported.
> . . .
> *[TERRORIST ATTACKS /Asbestos Targeted In Cleanup Effort*
> *EPA's Whitman: 'No reason for concern', by Hugo Kugiya, Newsday, 9/16/01,*
> *http://www.newsday.com/news/printedition/newyork/ny-2368899sep16.story]*

R: VOLUNTARY CLEANUP PROGRAM - FAILURE TO CLEAN ENTIRE BUILDINGS – FAILURE TO CLEAN BUSINESSES

"Indoor air program is voluntary, so the entire building may not be cleaned up and there is the possibility of recontamination." ***[1/27/03 EPA IG report]***

EPA's voluntary cleanup program is flawed because it is only voluntary, and only for residential spaces. It offers no cleaning whatsoever for business establishments. Not only will the cleaning be sporadic, but in the future, no person will ever have the confidence to rent either residential or office space surrounding Ground Zero because they will not known whether it is currently contaminated or will become recontaminated from nearby units and buildings that were inadequately abated.

EPA has the authority to force cleanups individual units and whole building

EPA claims that it does not have the authority to force cleanups:

> Mears, the EPA spokeswoman . . . "In order for us to demand access to people's homes, it would have to be a public health emergency," Mears said. "We don't think that is the situation we have here at all."
> . . .
> *[LA Times, 9/4/02 - A Toxic Legacy Lingers as Cleanup Efforts Fall Short, By Maggie Farley, Los Angeles Times Staff Writer, September 4, 2002, http://www.latimes.com/news/specials/911/la-na-poison4sep04.story?null]*

EPA has the legal authority and mandate to gain access to all contamination, even in private dwellings and businesses, as discussed in Section V of this report. There does not need to be a public health emergency under the National Contingency Plan (NCP) for EPA to have legal access.

The following are the relevant parts of the NCP regulations contained in Title 40 of the Code of Federal Regulations, Part 300. Not only does EPA have the authority over indoor air and other hazards, it also has the authority for entry without the consent of the building owner. The fact that EPA has and is conducting the investigation and cleanup of the WTC under the NCP authority is discussed in Section V.

> §300.400 General.
> (a) This subpart establishes methods and criteria for determining the appropriate extent of
> response authorized by CERCLA and CWA section 311(c):
> . . .

(d) Entry and access.
(1) For purposes of determining the need for response, or choosing or taking a response action, or otherwise enforcing the provisions of CERCLA, EPA, or the appropriate federal agency, and a state or political subdivision operating pursuant to a contract or cooperative agreement under CERCLA section 104(d)(1), has the authority to enter any vessel, facility, establishment or other place, property, or location described in paragraph (d)(2) of this section and conduct, complete, operate, and maintain any response actions authorized by CERCLA or these regulations.
. . .
[Title 40 of the Code of Federal Regulations, Part 300 (40 CFR §300, http://www.epa.gov/epahome/cfr40.htm]

Recontamination problem with voluntary cleanup program

Under the voluntary program, entire buildings are not being cleaned, and there is a danger for recontamination. Heating, ventilation, and air conditioning (HVAC) systems are not being routinely cleaned under EPA's voluntary cleanup program.

5/8/02
Finally, the critics say the EPA's plan to respond mainly to residences seeking more cleanup could be flawed, since neighbors who don't request cleaning could still have asbestos in their homes which could continue to contaminate the building.

"If this is just a voluntary cleanup, it won't be much of a cleanup," said Cate Jenkins, a senior scientist with the EPA in Washington who has been helping residents pressure the agency into taking a stronger stance over the cleanup.
. . .
[EPA, in Reversal, to Test Homes In Lower Manhattan for Asbestos By JIM CARLTON, 5/8/02, THE WALL STREET JOURNAL]

5/15/02
Census figures show 23,700 occupied housing units below Canal Street, which could drive overall costs as high as $113 million if every resident asked for cleaning and testing. Mears noted the agency believes far fewer than 23,000 apartment dwellers will request cleanup so the cost will be well below the top estimates.
. . .
The agency said last week that there were roughly 15,000 apartments in the affected area. Mears said that miscommunication between city and federal agencies led the agency to underestimate the number.
. . .
[EPA Rapped for NYC Cleaning Program, 5/15/02, By Michael Weissenstein, Associated Press]

9/4/02
Beginning this month, each of the 30,000 residences below Canal Street is eligible to have a team wipe down every surface in the home, wet-vacuum the rugs and upholstery and check the vent outlets for asbestos. So far, 3,205 people have applied for a full cleanup and 905 for testing only.

[A Toxic Legacy Lingers as Cleanup Efforts Fall Short, By Maggie Farley, Los Angeles Times, 9/4/02]

9/9/02
Other critics say the EPA ought to be protecting workplaces as well. "There are thousands of offices and stores where asbestos-tainted dust fell and where cleanups were insufficient," says Jonathan Bennett of the New York Committee for Occupational Safety and Health. "It still lingers in boiler rooms, crevices and carpets."
. . .
Rep. Jerrold Nadler, D-N.Y., an outspoken critic of the EPA's handling of the situation, puts it more strongly. "One year later, it's outrageous that people are still living in contaminated spaces," says the congressman. "People are still anguishing over the known hazards and possible hazards of what they're breathing in their homes."
. . .
[Dusting off Manhattan: A year after 9/11, worries about toxic dust plague residents, 9/9/02, By Francesca Lyman MSNBC, http://www.msnbc.com/news/803400.asp]

5/8/02
But in dozens of interviews with residents over the last eight months, questions have continued to resonate about how clean is clean. Among the issues that will probably emerge under the new cleanup policy is whether residents will consider a building clean if only some of the apartments, but not all, participate in the E.P.A. program since dust, as anyone who has ever wielded a broom can attest, tends to move around, tracked from place to place.
. . .
[E.P.A. to Lead Cleanup Effort of Homes, Close to Ground Zero, By KIRK JOHNSON, 5/8/02, NY Times]

110 Liberty St. study shows need for HVAC as well as whole building cleanings

In Section G on EPA's 110 Liberty St. pilot cleaning study, EPA proved that carefully coordinated, whole building abatements were necessary, including the exterior of the building. Otherwise, the apartments and stores were not able to pass even EPA's lenient air test levels.

In particular, the stores in the building had an HVAC system. The mattress store needed to be cleaned 4 times before it could pass EPA's cleaning criteria. The cleaning measures were

extreme, certainly not anything that a resident could do her/himself with a HEPA vacuum and wet wiping. After repeating these extreme measures 3 times, EPA added on the cleaning of the HVAC system. It was only after the cleaning of the HVAC system that EPA could get the mattress store to pass the air tests.

EPA tested the dust before starting its study and found that it contained less than 1% asbestos. All furnishings were removed from the apartments and stores prior to the cleanings and testing. In addition, all common areas of the building were cleaned first, and the exterior roof and facade was cleaned 2 times simultaneously.

Many tenants have said that insurers do not want to pay for the abatement of individual apartments until after the landlord has cleaned the entire HVAC system. This indicates that asbestos professionals recognize HVAC systems as known sources for recontamination of asbestos and other particulate contaminants. This recent EPA study at 110 Liberty St. also proves this fact.

Offices need to be included in cleanup program

EPA is claiming that it lacks the authority to clean offices in NYC after the WTC collapse, that insurance will take care of it, and that it is the financial responsibility of employers to clean up.

Even if this were true, not cleaning up offices in EPA's voluntary cleanup program will result in pockets of contamination, recontaminating residential spaces. This is the same as the problem with having the EPA cleanup program voluntary for residents in apartments units that are not cleaned, or not cleaned at the same time, will result in recontamination of the units that did participate in the EPA program.

Claims by EPA that it lacked the authority to clean offices

The following are claims by EPA that it could not clean offices:

> 5/28/03
> But Mears countered that cleanup efforts are the responsibility of business owners, not the EPA. "According to OSHA standards, worker safety must be provided and financed by employers," she said.
>
> Will Insurance Pay? "Most businesses have insurance to pay for professional cleaning," she added. "Our program is directed towards concerned citizens who may not have the money to ensure that their homes are truly free of contaminants."
> . . .
>
> *[Poisons from Towers Crash Still Loose in Manhattan, Rep. Nadler Says, Calling EPA a*

'Disgrace,' By Kent Vander Wal, 5/28/03,
http://www.columbia.edu/cu/libraries/indexes/cq-homeland-sec.html]

2/11/03
In a statement Monday, Jane M. Kenny, regional administrator of the EPA said the agency "has focused our cleaning and testing program on residential buildings, because lower Manhattan residents are most in need of assistance." She added that "commercial establishments had access to a variety of programs," including small business loans and private insurance.
. . .
[EPA Official Says Agency Is Responsible for Cleanup Testimony Contradicts Previous Public Stance On Post-Sept. 11 Cleanup in Lower Manhattan By MOTOKO RICH, Wall Street Journal, Special Page, 2/11/03]

Whitman's speech in Libby, Montana admitted EPA cleanup authority over indoor air at businesses as well as private residences

Administrator Whitman also stated, just 4 days before the WTC disaster, that EPA had the authority to clean up asbestos in businesses as well as homes in the town of Libby, Montana, whether or not the town was listed as a Superfund site (the equivalent of an National Priorities List listing):

9/7/01
And because we share that goal I want to assure you of something else. It has never been our plan to look to you to pay for any part of this clean-up, including the clean-up of residential properties.

That is why I am pleased to announce today that EPA is taking an unusual legal step to protect you from future liability, whether or not we end up listing Libby on the NPL *[National Priorities List, or Superfund]*. We will be providing homeowners with legal guarantees called "A No Act ion Assurance" that will prot ect them from EPA's ever seeking to have them assume the costs of cleanup. Similarly, local businesses in Libby that did not know about the hazards of vermiculite before November 1999, and that did not profit from its use, will also receive this guarantee.
. . .
[Remarks of Governor Christine Todd Whitman, Administrator of the U.S. Environmental Protection Agency, at a Town Hall Meeting, Libby, Montana, 9/7/01, http://www.epa.gov/newsroom/]

Section V on the National Contingency Plan (NCP) gives other examples where EPA is cleaning up businesses from hazardous releases from sources other than the business itself. The NCP is the same statutory authority under which the WTC aftermath is being remediated by EPA.

There is inadequate insurance for business cleanup in NYC

EPA is incorrect in its assertion that businesses have enough insurance to pay for cleanups. If this were true, then building owners of residential apartments, who are also businesses, would have quickly gone to their insurers and cleaned common areas and roof tops. Obviously, this did not happen.

Other businesses as well do not have adequate insurance. One major problem has been that insurers for businesses, as well as residences, have been refusing to pay based on EPA claims that there were no hazards.

Press and other accounts of problems with commercial space cleanups after WTC

The following are a few accounts which illustrate the need for an expansion of the EPA cleanup program to businesses as well as residences and schools, so that the whole area gets remediated.

> 6/19/02
> Located one block north of the World Trade Center, the 1 million square- foot office at 100 Church St. suffered serious damage on Sept. 11. Over 500 windows were blown out, and much of the building was permeated with toxic dust. Its tenants, including the Bank of New York, Merrill Lynch and the City of New York's legal department, were forced to relocate until it was safe to return.
>
> But when was that? According to the owner, Zar Realty Management Corp., the building wasn't ready to be reoccupied until early spring. But Allianz Insurance Co., the property's insurer, believes 100 Church was safe for tenants to return in January. The fight is continuing even though most of the tenants are now back in the building.
> . . .
> The dispute is one of the many that have erupted among landlords, insurance companies and tenants following Sept. 11 over how much cleanup work is necessary before buildings are habitable.
> . . .
> So they had to figure out the rules as they did the work, and towards the end of 2001, Zar and Alllianz began to disagree over what those rules were.
> . . .
> According to the insurance company, Zar's environmental engineer, Ambient Group Inc., conducted air tests in January that failed to disclose the presence of asbestos at unsafe levels. "Thus, as of January 2002, the premises were certified as restored and ready for re-occupancy by Ambient," states a letter sent to the Insurance Department by Albert Bosch, an Allianz assistant vice president.
> . . .
> But the New York Law Department also hired an environmental engineering firm, TRC, to check on the safety of the building, and TRC came up with different results. TRC analyzed dust samples from the building's mechanical rooms and heating-andventilation system and found that asbestos and lead levels were unsafe. "Based on these results, TRC recommended a recleaning and encapsulation of the return-and-supply ducts and air-handling units in the building, Mr. Stein pointed out in a letter to the Insurance Department.

Then it was Allianz's turn to reinspect. The insurance company hired Lawrence Kornreich, of Enviro-Sciences Inc., to evaluate TRC's tests. Mr. Kornreich reported that TRC's tests "were based upon surface wipes and micro vac sampling tests, which are not the testing methods prescribed" by the city's Department of Environmental Protection, according to Mr. Bosch's letter. In addition, Mr. Kornreich stated that the "aggressive air samples" tested by Ambient "were sufficient to demonstrate that the premises could be reoccupied," the letter states.

So the battle was down to dueling testing methods. Mr. Stein said it's not clear whether the contamination that TRC found occurred on Sept. 11 or whether those areas were cleaned and then recontaminated during the cleanup process. But once TRC found the dangerous dust, Zar had little choice but to clean it up, and Allianz was responsible for reimbursing the costs, he said. The air-quality tests performed by Ambient in January "were voided by the discovery of areas that were contaminated," he said.

. . .

[Landlord and Insurer Battle over 9/11 Cleanup, 6/19/02, By PETER GRANT, Wall Street Journal, Special to RealEstateJournal.com, http://homes.wsj.com/columnists_com/bricks/20020619-bricks.html]

2/10/03

Possibly hundreds of thousands of New Yorkers work for hours a day in workspaces that remain uncleaned, or insufficiently cleaned, of hazardous substances unleashed from the World Trade Center collapse -- and the Environmental Protection Agency (EPA) is to blame -- Rep. Jerrold Nadler (D-NY) said today at a City Hall press conference.

The Congressman was joined by the New York Committee for Occupational Safety and Health (NYCOSH), as well as victims of EPA inaction. Together, they presented new evidence that proves that there has been inadequate hazardous materials testing and remediation in downtown workspaces -- which is threatening the public health -- and that EPA has been lying to the public about its responsibility in the matter.

"This is an outrageous story of EPA inaction, buck-passing, cover-up, and, criminal negligence of its role in protecting the public health," Rep. Nadler said. "There is no rational or legal explanation for the EPA cleaning indoor residential spaces, but excluding workspaces."

. . .

TEST RESULTS AND HEALTH AND ECONOMIC IMPACT ARE SERIOUS

The EPA has maintained since days after the collapse of the World Trade Center, that the area is safe. Yet, today, Rep. Nadler introduced victims to discuss test results, health and financial impacts, and other issues related to EPA's false safety assurances and lack of action. For example:

The employees of the Securities and Exchange Commission (SEC), who work in the Woolworth Building: A representative provided evidences of samples that were taken in three areas of the building, and showed asbestos readings of above 74,000 structures per square centimeters and as high as 850,000 structures (although no amount of asbestos is considered safe, 100,000 structures and above is considered an 'asbestos emergency'). All samples were taken by Detail Associates and sent to International

Asbestos Testing Labs.

A woman who lives outside lower Manhattan, but works at the Municipal Building: She said that she had no health problems prior to September 11th. However after returning to her workplace, she has experienced significant respiratory disease.

The owners of Steamers Landing Restaurant in Battery Park City: They stated that although they undertook a major hazardous materials remediation of their restaurant at their own expense, they were unable to collect insurance to pay for it, because the EPA consistently and falsely maintained that the area was safe.

“Beyond this being a matter of life and death, if workspaces are not properly tested and remediated for hazardous materials, the City and State of New York stands to face tremendous future financial costs in terms of contingent liability as well as untold productivity impacts due to a potentially massive rise in occupational disease,” said Rep. Nadler. “The EPA must end its stonewalling, and finally carry out its legal and moral responsibility to clean up all buildings contaminated in the terrorist attack.”

. . .

[NYC WORKFORCE MAY FACE SERIOUS HEALTH RISK, 2/10/03, Press Release, Representative Jerrold Nadler, http://www.house.gov/nadler/EPA_021003.htm]

11/9/01

Dr. Stephen Levin, medical director of the Mount Sinai Center for Occupational and Environmental Medicine, told the Committee on Environmental Protection that dozens of people developed illnesses from working or living near the site. T he problems include onset asthma, facial pain, upper respiratory dysfunction, chronic laryngitis, chest tightness, wheezing and psychological stress. He said the most serious problem was several new cases of asthma in adults working in nearby offices.

"Whenever there's onset asthma in an adult we always suspect an environmental problem," Levin said. "We're seeing it among office workers and that's worrisome because they're ... harder to protect."

. . .

[Cleanup WorriesResidents, doctors see WTC health risks, By Bryan Virasami, Newsday, 11/9/01]

2/11/02

Workplaces have been left out of the EPA cleanup plan without any apparent scientific and legal basis, charged Joel Shufro, executive director of the New York Committee for Occupational Safety and Health, a union and public health group. He said his group's inquiries to the agency "have been treated with evasion and delay bordering on contempt."

In the absence of regulatory pressure, some employers have "acted responsibly" to deal with contamination issues and others have not, Shufro said at the news conference. "We are here to demand that EPA revise its plan and include workplaces as a necessary and integral part of its program."

Problems in Downtown Manhattan

Arguing that downtown Manhattan continues to show signs of workplace contamination despite official assurances that the area's air is safe to breathe, Nadler was joined by union representatives complaining of inadequate workplace cleanups, workers with lingering respiratory illness, and business owners who said their insurance recoveries have been blocked by EPA's position on the risks of the contamination.

"We cannot again bury our heads in the sand," Nadler said. "Just because we cannot necessarily see the contaminants of concern, that does not mean they aren't still there and does not mean we should go back to business as usual."

Among the workplaces where contamination remains a concern, the union representatives said, are the relocated New York office of the Securities and Exchange Commission, a Manhattan community college, and several of the city's firehouses. "In the eyes of the world, we're heroes, but in EPA's eyes, we're nothing," complained Rudy Sanfilipo, a Uniformed Firefighters Association trustee.

. . .

[Nadler Says Workplaces Neglected In World Trade Center Dust Cleanup, BNA, Daily Environment Report, 2/11/03]

2/11/02

New York Democratic Rep. Jerrold Nadler disclosed the testimony of Marianne Horinko, assistant administrator of the EPA, in a news conference here where he blasted the environmental agency for failing to clean up commercial spaces in the wake of the Sept. 11 terrorist attacks. When the World Trade Center collapsed, it blew piles of potentially contaminated dust into nearby buildings, and tenants and landlords have been struggling to clean it up ever since.

In Ms. Horinko's testimony, given January 6 as part of a sworn deposition in a labor dispute, she said the EPA "has the lead in the environmental response" to the terrorist attacks. In response to a question about who had the ultimate responsibility for "the cleanup of interiors," Ms. Horinko said: "Ultimately I suppose it would be Governor [Christine Todd] Whitman as the administrator [of the EPA]."

To date, the agency has said it has been offering a supporting role to the city and state of New York. After months of criticism, the EPA announced in May 2002 that it would offer cleanup to residents who request it. That cleanup program began in September, and to date the agency has cleaned 1,228 apartments and tested another 361 units. The EPA hasn't offered any cleanup program for the hundreds of offices, restaurants and retail shops in lower Manhattan.

. . .

[EPA Official Says Agency Is Responsible for Cleanup Testimony Contradicts Previous Public Stance On Post-Sept. 11 Cleanup in Lower Manhattan By MOTOKO RICH, Wall Street Journal, Special Page, 2/11/03]

4/12/02

Commercial tenants, particularly smaller businesses, have had similar problems to those of the residential tenants (large financial services firms were necessarily in better shape -- they had the means to clean their own spaces and the leverage to get building owners to clean the common areas). Small commercial tenants were given the same, inadequate cleaning protocols, have lacked sufficient funds (most have received only loans, not direct grant assistance), and have had insurance claims denied due to Ms. Whitman's safety assurances. They also had the same trouble getting their building owners and managers to clean common spaces. But moreover, inaction on the part of less scrupulous employers or business owners have left individual employees at these firms with nowhere to turn if their employer chose not to test and remediate properly or at all. Congressman Nadler's office has received numerous calls from employees of both private and public entities who are concerned about the indoor air in their workplace, but fear job loss if they "make too many waves."* (*Footnote: Statement taken from Constituent Services Staff Members, Office of Congressman Jerrold Nadler (NY-08).)

. . .

[U.S. Congressman Jerrold Nadler, White Paper, Lower Manhattan Air Quality, Last Updated, April 12, 2002, http://www.nyenvirolaw.org/PDF/EPA%20White%20Paper%20Final%204_121.pdf or http://www.911digitalarchive.org/objects/112.pdf]

S: FAILURE TO TEST FOR OTHER TOXINS DURING CLEANUP

"EPA did not have data on more than half (10 of 14) of the pollutants of concern (POC's) that scientists believe the public was potentially exposed to immediately after the collapse of the WTC towers. . . . What additional actions, if any, should EPA take to improve its response and recovery efforts . . .Also, tests are only cleaning and testing for asbestos." ***[1/27/03 EPA IG report]***

Time and again EPA claimed that their voluntary residential cleaning program in lower Manhattan actually was not needed, but was for the sole purpose of reassuring residents, "calming jittery nerves," etc. See below and Section B for quotations of EPA making these statements from May through December, 2002.

If it is true that EPA is only conducting the voluntary residential cleanup as a psychological gesture for traumatized New Yorkers, then it should do the job right and assuage their needless fears by testing for other toxic substances in addition to asbestos. There is ample discussion of these other toxic substances in the press. EPA should consider this as an indication of public concern, and therefore reason enough to test for additional toxic substances. After all, the president said "spare no expense" in the cleanup of NYC. That was a promise that must be kept:

> 9/14/01
> "We're getting in there and testing to make sure things are safe," Whitman says. "Everything will be vacuumed that needs to be, air filters (in area buildings) will be cleaned, we're not going to let anybody into a building that isn't safe. And these buildings will be safe. The president has made it clear that we are to spare no expense on this one, and get this job done."
> . . .
> *[Newsweek, 9/14/01, Asbestos Alert, by David France and Erika Check, http://msnbc.com/news/629268.asp?0sp=w12b2&cp1=1]*
>
> _____
>
> 9/14/01
> "The President has said, 'Spare no expense, do everything you need to do to make sure the people of this city and down in Washington are safe as far as the environment is concerned,' " Whitman said.
> . . .
> *[EPA CHIEF SAYS WATER, AIR ARE SAFE , New York Daily News; 9/14/01; SUSAN FERRARO]*
>
> _____

5/15/02
EPA officials say the remaining dust poses little health risk. . . . EPA officials say the program is designed mainly to reassure jittery residents that their homes are safe.
. . .
[EPA Rapped for NYC Cleaning Program, 5/15/02, By Michael Weissenstein, Associated Press]

5/8/02
"This is to assuage concerns from residents in Lower Manhattan who continue to have concerns over air in their apartments," said Mary Mears, spokeswoman for Region II of the EPA.
. . .
[EPA to Clean WTC Apartments, 5/8/02, By Alex Cukan, United Press International]

12/20/02
The December 28th deadline for lower Manhattan residents to sign up for EPA's cleaning and testing program is drawing near . . . "Our cleanup program is designed to reassure residents that they have reduced the risk from exposure to dust left over from the collapse of the World Trade Center," said Jane Kenny, EPA Regional Administrator. "Now is the time to call the hotline to sign up."
. . .
[EPA Region 2, DEADLINE TO SIGN UP FOR EPA LOWER MANHATTAN CLEANING AND TESTING PROGRAM DRAWS NEAR, 12/20/02, http://www.epa.gov/region02/news/2002/02134a.htm]

List of WTC constituents that will be tested in EPA's voluntary cleanup program

EPA is testing for asbestos only during the voluntary cleanup program. EPA is testing additional substances at random, but in too few homes to have any statistical power to establish that these substances are not occurring elsewhere. EPA also tested other substances in its 110 Liberty St. pilot cleaning program, discussed in Section G. The following list of what will be tested during the voluntary cleanup program is from the EPA website:

What will EPA test for?
EPA will test for asbestos in the indoor air after the cleanups are completed (and in residences where people want testing without cleaning). The Agency will assess the testing results using a health-based benchmark that assumes a thirty year exposure. This means that if a population of 10,000 people is exposed to a level of asbestos above the benchmark for a period of thirty years, there could be one additional case of cancer beyond what that population would normally expect to experience.

Will you test for dioxin and lead and substances other than asbestos?
We will test for asbestos in air. This is the substance of greatest concern, and air is the

pathway of exposure. By cleaning up the dust, many other substances will also be removed. In addition, we are conducting dust-wipe testing in 250 randomly selected homes. These dust wipes will be analyzed for dioxins plus 23 elements, including:

aluminum (Al)	
antimony (Sb)	magnesium (Mn)
arsenic (As)	manganese (Mg)
barium (Ba)	mercury (Hg)
beryllium (Be)	nickel (Ni)
cadmium (Cd)	potassium (K)
calcium (Ca)	selenium (Se)
chromium (Cr)	silver (Ag)
cobalt (Co)	sodium (Na)
copper (Cu)	thallium (Ti)
iron (Fe)	vanadium (V) and
lead (Pb)	zinc (Zn)

Our scientists will evaluate whether substances other than asbestos might pose a significant risk, and will determine if any refinement to cleanup guidance is needed. Any proposed benchmarks for substances on the list will be peer reviewed by independent scientists.

. . .

[EPA, Frequently Asked Questions, http://www.epa.gov/wtc/questions]

Expert panel convened by EPA recommended testing for more toxic constituents

The expert panel convened by EPA to advise it on its own cleanup program recommended expanding the list of hazardous substances to be tested in residences:

The panel noted that the overall method of selection of contaminants of potential concern (COPC) was not unreasonable, but greater effort is needed to include more potential contaminants. They also noted that greater transparency in the selection process needed to be provided. In addition, several individual panel members noted specific contaminants that might need further consideration.

. . .

In summary, the following overall suggestions were made:

> Include more potential contaminants as appropriate based on the availability of additional sources of relevant data as noted by the panel and observers.

. . .

Several panel members commented that the list of COPC seemed to have been narrowed fairly rapidly, and asked for clarification from the document authors on this process. For example, one panel member asked if technical soundness of the assessment was lost by setting benchmarks, while at the same time engaging in clean-up activities, rather than the more standard risk assessment approach applied to Superfund sites where COPC are identified and benchmarks are set prior to making clean-up decisions. The document author noted that the Superfund type of approach would be more comprehensive, but that the required representative sampling, sampling

analysis plans, and data interpretation can take years to complete, and therefore, a decision was made by the Agency to follow a parallel track. A panel member noted that the incremental costs of analyzing a sample for additional compounds such as additional metals is often not that great. Based on this consideration, the panelist asked whether it was necessary to pare down the list of COPC so early in the process. A document author responded that the a standard protocol is to pare down the list of COPC to a manageable size based on the toxicology and exposure screening process, but noted that in the clean-up sampling a full battery of metals are being tested. One panel member asked about the availability of data on PCB levels in settled dust, since the document's Appendix A did not indicate that this type of data had been used for screening out PCBs.
. . .
[World Trade Center (WTC) October 21-22, 2002, Peer Review Meeting Notes, 2/7/03, Prepared by: Toxicology Excellence for Risk Assessment, Prepared for: U.S. Environmental Protection Agency, http://www.tera.org/peer/wtc/]

The panel, hired by the EPA as part of a federally mandated peer review process, urged that the agency's cleanup plan be altered to: Ex pand testing to include a wider array of toxic contaminants, not just the handful, like asbestos or lead, that the EPA is monitoring.
. . .
Several panel members said they were surprised that the EPA began its cleanup program even before the panel had finished its review process.

"We felt EPA should be more inclusive of chemicals rather than exclusive," said Michael Dourson, director of toxicology for the private group and chairman of the panel. The number of chemicals tested, he said, should possibly rise to 17 from six. Dourson will write the panel's final report.
. . .
Under intense questioning from the panel, EPA representative Mark Madeleine repeatedly said his agency welcomed the criticism and would amend its standards to address the concerns.
. . .
[EPA's 9/11 cleanup needs a fresh look, 10/29/02, NY Daily News, http://www.nydailynews.com/news/local/v-pfriendly/story/30987p-29393c.html]

Earlier comments on need to test and account for the aggregate, synergistic carcinogenicity and toxicity of different toxic constituents

Throughout the oversight process of the WTC cleanup, many public health officials and scientists have stressed the need to test for and calculate the aggregate, synergist risk of the range of all toxic constituents found in WTC dust. This was long before EPA convened its peer review panel, who was quoted above.

In particular, EPA failed to test for toxic constituents in dust other than for asbestos, even though their limited air and surface water sampling indicated a need to do so. The following are earlier

comments submitted to EPA on the need to consider aggregate risks from other toxicant contaminants in addition to asbestos.

> 11/15/01
> The EPA tested dusts from the Trade Center fallout covering streets and other surfaces. EPA found asbestos. . . . EPA did not test for other toxic substances in these surface dusts, such as fiberglass, PCB's, dioxins, lead, etc. *[Jenkins, 11/15/01]*

> 2/11/02
> For carcinogens, the detection limit should be at or lower than the cancer risk at the 10^{-6} ("ten to the minus six") risk level. This corresponds to those levels found by EPA to be associated with a cancer risk of 1 in a million. It is EPA policy to evaluate human exposures to carcinogens at this level as "the point of departure" for any formal decision process for remediation that might justify exposing citizens to higher cancer risks . . . because several carcinogens are potentially present at levels of concern, it would not be sufficiently protective to test each carcinogen at the 1 in 10,000 risk level (10^{-4} risk level). This is because the carcinogenic risks of the all of the carcinogens could add up. If each is only tested 10^{-4} risk level, then the aggregate risk could be much higher than 1 in 10,000, which is always EPA's action level. For other hazardous substances, which are not carcinogens, the detection limit must be at or below the established EPA reference dose for humans (RfD), or the lowest observed effect level (LOEL) in any animal study divided by a safety factor of 10,000. . . . *[Jenkins, 2/11/02]*

> 2/10/02
> It is particularly important to test asbestos at the 10^{-6} risk level, because other carcinogens and possible carcinogens are potentially present in WTC fallout, including fiberglass, dioxins, PCB's, and heavy metals. If several are present, the carcinogenic risk could be additive and result in a higher aggregate cancer risk. . . . *[Jenkins, 2/10/02]*

Lead

Hazardous levels of lead have been found in indoor WTC dust

High levels of lead have been found in WTC dust by EPA as well as independent researchers. The following is a press account of research published in the journal *Environmental Health Perspectives*.[72]

> Dr. Paul Lioy of the University of Dentistry and Medicine of New Jersey announced last week that he had found levels of lead in dust samples from around the World Trade Center disaster area that may pose a threat to the public health. At a public meeting at

> New York University, Dr. Lioy characterized the levels as "moderate", and said that the lead needs to be removed from homes and buildings, especially where children are likely to come across it.
> . . .
> *[Environmental Aftermath, By Michael Burger, Gotham Gazette, 10/22/01, http://www.gothamgazette.com/commentary/106.burger.shtml]*

EPA 110 Liberty St. pilot cleaning study shows hazardous lead levels, and fact that asbestos testing does not indicate whether lead has been cleaned up

As discussed in greater detail in Section G on EPA's pilot cleaning study of apartments at 110 Liberty St., testing for asbestos is not a surrogate for testing for lead.

Before cleaning, only 23% of the apartments had safe levels of lead (only 3 out of 13 apartments had safe levels). Most of the apartments (7 out of 13) did not even have visible WTC dust, except around the heating baseboards.

Asbestos testing was not an indicator of whether hazardous lead levels were present. Failure to meet the EPA asbestos criterion was responsible for triggering 82% of the second and third cleanings. However, the other 18% of the additional cleanings that were required were due to high lead concentrations, not to asbestos. In these lead contaminated apartments, the asbestos levels passed EPA's criterion. Thus, using asbestos in air as the only for determining whether an apartment was cleaned would not have caught the lead contaminated apartments.

The EPA 110 Liberty St. study concluded the following, which is absolutely false and unsupported by the data in the study:

> The study found that conducting asbestos in air sampling after cleaning could be used as a surrogate method for determining if future cleaning was needed.
> . . .
> *[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, NY New York, NY, 5/03, EPA Region 2, p. 114, http://epa.gov/wtc/confirmation_clean_study.htm]*

During EPA's voluntary cleaning program, EPA is finding elevated lead levels

During its voluntary residential cleanup program, EPA has also found elevated lead in an apartment that had already been abated by the landlord. EPA subsequently cleaned the apartment again as part of its voluntary program, and the lead levels were reduced to acceptable levels. Like EPA's 110 Liberty St. study, this also demonstrates the need to test for lead and other toxic constituents:

4/15/03

The Wilsons wanted to stay in Lower Manhattan, but the reminders of the Sept. 11 terror attack have intensified for them in recent months with the heightened Code Orange security measures. They had already decided to leave when they found out something that strengthened their resolve: they had elevated levels of lead in their apartment at 22 River Terrace, according to the results of an in-depth testing and cleaning of their apartment by the Environmental Protection Agency.

The March E.P.A. letter to the Wilsons stated that "the only metal on this list that was identified as posing a potential health effect from the WTC collapse was lead."

"It was shocking," Josh Wilson said. "My general question is how can this happen?"

E.P.A. contractors cleaned the Wilsons' apartment several months ago and subsequent tests revealed safe levels of lead, but the letter did not explicitly say that the current levels were safe. A chart indicating the levels before and after the cleaning was enclosed in the mailing.

Wilson, who declined to be photographed for this article, said that representatives of his building's landlord, Rockrose Development Corporation, assured him that the building had been cleaned according to government standards after the trade center collapse. He said he would never have signed a lease in November, 2001 if he thought that he might be jeopardizing the health of his then-4-month-old son.

"I asked them all these questions and they yes-sed me to death," Wilson said of Rockrose.

The level of lead found on the Wilson's kitchen counter top before the E.P.A. cleaning was 41.9 micrograms per square foot. This exceeds the threshold of 40 micrograms per square foot used by the Department of Housing and Urban Development and the more stringent 25 micrograms per square foot threshold adopted by the E.P.A. for their residential cleaning program in Lower Manhattan. After the cleaning the level was 6.58.

Rockrose denies any negligence in the post-9/11 cleanup of their apartments.

"We did all the required cleaning and testing," said Sofia Estevez, the vice president for marketing and leasing at Rockrose.

Estevez said that the only apartments that were not cleaned after the trade center disaster were those whose owners declined the service. Furthermore, according to company policy, the Wilson's apartment would have been thoroughly cleaned and repainted before the family moved in, Estevez said.

Had the apartment been cleaned after Sept. 11, there is still a chance that some lead could have returned afterwards, said Mary Mears, an E.P.A. spokesperson. Mears said she could not address the Wilsons' particular situation without more information, but noted that lead travels in dust and, hypothetically, some lead could return to an apartment that had been cleaned, especially during the cleanup of the World Trade Center site.

In addition, a certain amount of lead is often present in urban air due to years of lead-based paint and gasoline use, Mears said.

Last August, the E.P.A. began a program of voluntary asbestos testing and cleanup of residences south of Canal, Pike, and Allen Sts. Out of about 6500 households that registered for the program by the Dec. 28, 2002 deadline, 250 were randomly selected to receive a wipe test and analysis of 16 potential toxins, including lead, dioxin, mercury, and chromium. The Wilsons were among the 250.

Mears said that tests had been completed on 150 of the 250 apartments. She said some others also had elevated lead levels, but she did not have the exact number. In some cases, the lead could have been from lead-based paint, said Mears. She said there were no plans to conduct additional wipe tests in other apartments in 22 River Terrace since the cleaning program in the Wilsons apartment had reduced the level of lead.
. . .
However, this brought small comfort to Wilson and his family, who could have been living with elevated lead for more than a year. They feel betrayed by Rockrose.

"They expressly told us not to worry," Wilson said. . . .
. . .
[Dangerous lead was found in some apartments, 4/15/03, Elizabeth O'Brien, Downtown Express, http://www.downtownexpress.com, specific archived article at: http://www.zwire.com/site/news.cfm?BRD=1841&dept_id=112709&newsid=7722002&PAG=461&rfi=9]

Fiberglass (man-made vitreous fiber, MMVF)

In EPA's 110 Liberty St. study, high fiberglass concentrations were found even after apartments had been cleaned by rigorous EPA abatement, which had been preceded by professional abatement by the landlord as well as a cleanup by the fire department. Air is some locations exceeded EPA's criterion for fiberglass. High fiberglass concentrations were the cause of 3 recleanings.[73] Fiberglass exceeded EPA's criterion level in 2 of the apartments even after EPA had rigorously abated these individual apartments 2 times! See Section G on EPA's 110 Liberty St. pilot cleaning study.

The following are the conclusions of EPA's Office of Research and Development on fiberglass, and press coverage of the fiberglass issue.

<u>10/02</u>
The NYCDOHMH/ATSDR Final report also included data on synthetic vitreous fibers (SVF or fibrous glass) concentrations in indoor and outdoor dust samples at the same residential locations. SVF (PLM analysis) was detected in a larger number of indoor dust samples (26 of 57 or 46%) and at higher concentrations (range 2-35%) than asbestos. In outdoor dust at these properties, SVF was detected in 11 of 14 (79%) of samples (concentration range 15 - 72%).
. . .
[Exposure and Human Health Evaluation of Airborne Pollution from the World Trade Center Disaster, External Review Draft, 10/02, National Center for Environmental Assessment, Office of Research and Development, EPA, Publication Nos. NCEA - W -

1395, or EPA/600/P-2/002A, http://www.epa.gov/ncea or http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=36387]

10/22/01

At the same meeting *[a public meeting at New York University]*, Dr. Jacqueline Moline of Mt. Sinai Medical Center reported that fiberglass is one of the main constituents in air and dust samples at Ground Zero. Fiberglass is a suspected carcinogen. It also causes significant irritation of the eyes, nose and throat.

In a telephone interview, Carrie Loewenherz, an industrial hygienist with the New York Committee on Occupational Health, explained that NYCOSH has found fiberglass to comprise five to 95 percent of the weight of outdoor samples taken in the area, and 30 to 50 percent of indoor samples taken from a Church Street location across from the World Trade Center. Loewenherz pointed out that there are no state or federal standards for levels of fiberglass or for fiberglass cleanup. "There are guidelines [for cleanup] by the American Conference of Governmental Industrial Hygienists . . .

. . .

[Environmental Aftermath, By Michael Burger, Gotham Gazette, 10/22/01, http://www.gothamgazette.com/commentary/106.burger.shtml]

Asthma is one illness likely to be caused by or exacerbated by fiberglass and other airborne particulates. The Centers for Disease Control (CDC) conducted a survey of residents living below 110th Street in Manhattan, an area including Ground Zero, but also extending far north.[74] They found increases in the incidence and severity of asthma.

In animal studies, fiberglass causes chronic inflammation, as well as the possibility of cancer:

The works of Stanton and Pott suggested that longer fibers including non-asbestos fibers have more carcinogenic potential than short fibers. Fraire [Fraire et al., 1994] studied the effects on the pleural surface induced by intrapleural injections of fiberglass. The fiberglass preparation was carefully sized and consisted of fibers with a mean length of 2.2µm and a width of 0.15 µm. The changes he observed ranged from chronic inflammation, fibrosis, and foreign body reaction to mesothelial hyperplasia and dysplasia. The most dramatic pathological event was the occurrence of mesothelioma in three of the twenty-five animals.

. . .

[Accepted for publication in the American Journal of Industrial Medicine, 4/28/03, Asbestos Fiber Length as Related to Potential Pathogenicity: A Critical Review, Ronald F. Dodson, Ph.D., FCCP, FAHA; Mark A.L. Atkinson, M.A., D.Phil.; and Jeffrey L. Levin, M.D., M.S.P.H., The University of Texas Health Center at Tyler, Tyler, TX]

Mercury

EPA's initial testing in the days after 9/11 omitted testing for mercury in both air and dusts. This is because the analytical methods for mercury is different from the method that can test for a

range other heavy metals like lead and chromium at the same time.

To this day, EPA has never tested for mercury in airborne dusts. All the air testing has been for mercury in the vapor state of the metal. It is likely that mercury could be present in suspended particulates as chemically bound species.

The following is press coverage on the mercury issue in residences. There is a lot more coverage of the problems with elevated mercury blood levels in police officers working as first responders at Ground Zero.

> 9/9/02
> . . . "We all have been exposed to a host of toxic chemicals," says Todd, adding that tests of dust in her apartment turned up everything from asbestos to mercury to kaolin, a clay that causes skin irritation.
>
> Many residents worry about what was in the dust they breathed or still breathe. Jared Cook, president of a tenants group for one of Battery Park City's buildings, two blocks south of Ground Zero, says many tenants wish the EPA would test indoor spaces for other contaminants besides asbestos, since mercury, lead and other heavy metals, PCBs and dioxins have turned up in independent tests.
>
> Rather than protest, however, Cook says his group advocates that tenants take advantage of what the EPA is now offering. "We hope that letting EPA send in its certified contractors to test and clean for asbestos will most likely take care of most other contaminants as well," says Cook. Nevertheless he finds it unsettling that of the five or six residents who had themselves tested for exposure to heavy metals, all tested positive.
> . . .
> *[Dusting off Manhattan: A year after 9/11, worries about toxic dust plague residents, 9/9/02, By Francesca Lyman MSNBC, http://www.msnbc.com/news/803400.asp]*
>
> _____
>
> 6/6/02
> A series of tests in lower Manhattan by an independent consultant found surprising mercury levels up to seven months after the Sept. 11 collapses. New Jersey-based consultant, Uday Singh, who has testified in court as an expert on trade center dust and has been doing environmental testing for more than a decade, took the readings in apartments and street locations, including City Hall Park, in March and April. "When compared with mercury concentrations observed in non-industrial urban environments, the mercury vapor concentrations in lower Manhattan were greater by a factor of 1,000 to 1 million," he said. "It points to a potential for chronic exposure, and it is important that further studies be undertaken immediately."
> . . .
> *[Concern Over Mercury Tests show high levels near site, By Graham Rayman, Newsday, 6/6/02]*

Dioxins

EPA dismissed levels of toxins such as dioxins as being "very low" or "below the detection limit" despite the fact that levels of dioxin measured in the air many blocks away from Ground Zero were the highest ever detected in outdoor air. The following is an excerpt of the EPA ORD draft health risk evaluation.

> 10/1/02
> Dioxin Air Monitoring Data
> . . .
> The amount of time the monitor operates directly affects the amount of air that went through the monitors for dioxin collection: the Region 2/7 sampling captured dioxins contained in about 1000 m^3 of air (i.e., about this much air was drawn into the sampler over 72 hours), whereas the EPA ERT sampling captured dioxins in about 7 m^3 air. The majority of the EPA ERT samples simply did not contain enough mass of dioxins to be able to detect, much less quantify, the dioxin-like congeners in the sample.
> . . .
> The WTC and Church & Dey measurements from the first measurement day of September 23 through November 21 show unambiguous elevation, with concentrations ranging from about 10 to 170 pg TEQ/m^3. *[TEQ is a toxicity equivalent to 2,3,7,8-tetrachlorodibenzo-p-dioxin]*
> . . .
> The 6 Park Row measurements between October 12 and October 29 averaged 5.6 pg TEQ/m^3. These measurements are consistent with the mid- to late-October measurements at Church & Dey, which is slightly off-site from Ground Zero, of 10 to 20 pg TEQ/m^3. Further, the Church & Dey measurements of 10 - 20 pg TEQ/m3 for mid to late October are consistent with the WTC measurements for that time period of 20 - 50 pg TEQ/m^3. In other words, the highest measurements are onsite (WTC); the next highest measurements are slightly offsite (Church & Dey), and slightly lower concentrations are farther offsite (Park Row). This is strong evidence that emissions from the WTC site are the cause for elevated air concentrations within and near the WTC site.
> . . .
> Other measurements made in the United States and around the world can be used to put these measurements in perspective. As noted earlier, EPA's draft Dioxin Reassessment compiled urban and rural air monitoring studies and found average ambient concentrations of 0.12 pg TEQ/m^3 for urban and 0.017 pg TEQ/m^3 for rural settings. Higher concentrations have been identified in the literature, particularly near a known source of dioxin emissions. The highest TEQ concentration reported in the U.S. was > 1.0 pg/m^3, downwind of an incinerator in Niagara Falls, NY. Concentrations in the plume of a solid waste incinerator in Columbus, OH, that was known to be emitting large amounts of dioxins were about 0.25 pg TEQ/m^3. In this case, the stack was very tall (about 80 meters) and air measurements were taken about 2 kilometers away. Background air concentrations in Columbus were measured to be about 0.05 pg TEQ/m^3.
> . . .
> Although none of these literature measurements can be assumed to represent New York levels, they provide some basis for perspective. Certainly, no reports in the literature could be found on similar circumstance where there is, what is essentially, an area

source at ground level continually emitting dioxins near to where individuals are exposed. It would be reasonable to conclude that the concentrations to which individuals could potentially be exposed, in the range 10.0 to 170.0 pg TEQ/m^3 within and near the WTC site found through the latter part of November, are likely the highest ambient concentrations that have ever been reported.

. . .

[EXPOSURE AND HUMAN HEALTH EVALUATION OF AIRBORNE POLLUTION FROM THE WORLD TRADE CENTER DISASTER (EXTERNAL REVIEW DRAFT) 10/1/02 http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=54667]

High levels of dioxins also found in WTC dust

EPA should be testing for dioxins primarily in settled dusts with wipe samples. High levels were found by EPA in bulk dust from the WTC.

The EPA report EXPOSURE AND HUMAN HEALTH EVALUATION OF AIRBORNE POLLUTION FROM THE WORLD TRADE CENTER DISASTER (above) only considered airborne exposures when calculating risks to citizens in NYC. Dust levels were found to be high for dioxins (see below), but EPA did not take this into account in any risk assessments for citizens of NYC.

Table 1. CDD/CDF in Bulk Dust, Battery Pk and 2nd Pl; Sept 16, Units: pg/g (ppt)

CDD/CDF	Sample ID AO6354	Sample ID AO6353	Sample ID AO6355	Sample ID AO6351
2378-TCDD	1.44	2.68	3.41	5.18
Total TCDD	102	109	167	325
Total PeCDD	64.2	66.7	135	189
Total HxCDD	72.4	79.2	156	224
Total HpCDD	125	360	445	696
OCDD	299	1890	2630	3170
2378-TCDF	10.7	20.6	23.9	43.8
Total TCDF	656	910	1170	2190
Total PeCDF	392	451	693	1110
Total HxCDF	233	241	373	579
Total HpCDF	136	154	232	356
OCDF	81.5	113	168	238

. . .

CONCLUSIONS AND RECOMMENDATIONS

Examination of the NYC Response Monitoring database and the results discussed here

suggest several important conclusions:
. . .
Several very high concentrations of many toxic compounds were detected in the bulk dust samples, including CDD/CDF *[chlorinated dibenzo dioxins/chlorinated dibenzo furans]*, PCBs, PAHs, and metals.
. . .
[Special Investigative Audit #14: Environmental Data Trend Report, World Trade Center Disaster; Final Update - Trends for Data Collected 9/11/01 to 4/24/02 from Lower Manhattan, Prepared by IT Corporation for Office of Emergency and Remedial Response. (Draft Version - October 2001), posted at http://www.nycosh.org/WTCdraft2_102901.pdf]

Press accounts of dioxin problems from WTC fallout

The following are press accounts showing that dioxin contamination was and is an issue in the WTC cleanup.

12/13/02
Emission of dioxins in and around Ground Zero in the two months following the World Trade Center collapse were "likely the highest ambient concentrations that have ever been reported," according to a report released last week by the federal Environmental Protection Agency. This revelation is buried on page 77 of a 160-page report that the agency released last week.

Asked about the unusual timing, an EPA spokeswoman in Washington said: "This is a draft report. We really weren't trying to slide it under the door. The sooner the draft is released the more time there will be for public comment." EPA's press release and the media coverage over the weekend have focused on the report's most comforting conclusion - that most neighborhood people and office workers who returned to their homes and jobs after Sept. 17 were "unlikely to suffer short-term or adverse health effects" from contaminants in the air.

But the report also says that thousands of people who were caught in the huge dust clouds on Sept. 11, or who inhaled the air around Ground Zero in the first few days afterward, were "at risk for immediate acute [and possibly chronic] respiratory and other types of symptoms."

No immediate sampling

Health officials have no way of telling how toxic those initial clouds were, the report says, because major sampling of the Ground Zero environment did not begin for some toxics until Sept. 14 and for others until Sept. 23. As for dioxin, a product of uncontrolled combustion, unprecedented levels were even found several blocks beyond Ground Zero, in areas that were reopened to the public one week after the attack.
. . .
"Those air levels are outrageous," said Dr. David Carpenter one of the nation's top dioxin specialists and former dean of the School of Public Health at State University of New York at Albany. "There's a very significant health danger here."
. . .

[EPA Report Buries a Revelation, 12/13/02, By Juan Gonzalez, Daily News]

2/7/02

Environmental tests of Fiterman Hall, a 15- story building owned by Borough of Manhattan Community College and located just north of the World Trade Center site, have found troubling levels of cancer-causing dioxins, according to a private consultant hired by the college.

. . .

"We found unusually high levels of dioxin in dust samples throughout the building," Howard Bader, the consultant, said this week. "I'm talking about levels 20 to 90 orders of magnitude above results from other buildings where my firm has tested or cleaned in lower Manhattan."

. . .

An EPA toxicologist who reviewed Bader's results this week said yesterday that the EPA has no standards for dioxin in dust, but his analysis suggested that the levels in the building were "below EPA levels of concern."

. . .

[Note. Fiterman Hall is scheduled to be demolished]
[Dioxin Seen At College Downtown, by Juan Gonzales, 2/7/02, NY Daily News]

9/9/02

Many residents worry about what was in the dust they breathed or still breathe. Jared Cook, president of a tenants group for one of Battery Park City's buildings, two blocks south of Ground Zero, says many tenants wish the EPA would test indoor spaces for other contaminants besides asbestos, since mercury, lead and other heavy metals, PCBs and dioxins have turned up in independent tests.

. . .

[Dusting off Manhattan: A year after 9/11, worries about toxic dust plague residents, 9/9/02, By Francesca Lyman MSNBC, http://www.msnbc.com/news/803400.asp]

9/10/02

News of toxic substances other than asbestos being released into the air was not made public until Oct. 26, six weeks after the collapse of the towers, when the Daily News published my front-page column on the subject. My information had been gleaned from a quick review of nearly 800 pages of EPA test data, which the agency had been forced to release after Kupferman filed a Freedom of Information Act request. Only then did EPA officials concede that their testing had found elevated levels of other contaminants, including benzene, dioxins, PCBs, lead and chromium in the air and in water draining into the Hudson River from the Trade Center. However, agency officials insisted at a City Hall press conference that such high readings had occurred only as occasional "spikes"; that they were confined almost exclusively to the immediate vicinity of the debris pile; and that they would soon disappear following the extinguishing of the fires. The fires, however, turned out to be far more difficult to put out than anyone had initially predicted. They burned for nearly four months and even in late January were still smoldering below sections of the debris pile.

In the case of dioxins, among the most toxic substances known, the EPA repeatedly told the public that its test results showed very few readings above the agency's "removal action guidelines." In fact, the EPA has no standards for safe dioxin levels in air. Faced with high-level dioxin emissions around Ground Zero more typical of a volcanic eruption, the agency's top officials in the New York region simply asked their risk assessors to devise their own removal action guidelines. They then told the public that few of its tests had exceeded those guidelines, when in fact a substantial number of them had. EPA scientists in other parts of the country were shocked when they learned that the New York region was posting safety benchmarks for dioxin that had not gone through the agency's normal peer review process.

It wasn't until December that the agency began releasing results of ambient air tests it had conducted for dioxin outside of the actual Ground Zero site. Some of those tests showed high dioxin levels as far as half a mile away from the trade center. Other agency tests showed dangerous levels of PCBs in dust nearly a mile north of Ground Zero, in an area that had been reopened to the public on Sept. 17.

. . .

[Fallout, Fallout: The Hidden Environmental Consequences of 9/11, By Juan Gonzalez, In These Times, 9/10/02, http://www.alternet.org/story.html?StoryID=14073 , quoted from the book: Fallout, The Environmental Consequences of the World Trade Center Collapse, by Juan Gonzales, published by The New York Press, NY, 2002]

PCB's (polychlorinated biphenyls)

PCB's are another toxic contaminant associated with the fires at the WTC, and also contained in the dust as well, or deposited as an oily film on surfaces near Ground Zero. There has not been enough testing to be sure of the extent of the problem. EPA should be performing extensive wipe samples for PCB's.

PCB's were associated with the transformers which burned in the WTC fires. The following are press accounts:

6/6/02

To the list of areas requiring an ongoing environmental cleanup around Ground Zero, add the site of Seven World Trade Center. The collapse of the 47-story tower there resulted in the release of 130,000 gallons of oil from the Consolidated Edison substation, while an unspecified amount of oil leaked from two damaged storage tanks formerly owned by Salomon Smith Barney, an environmental report says.

In addition to the oil residue, the ground underneath Seven World Trade Center housed conduits potentially containing asbestos and feeder lines wrapped in coal tar, which may contain PCBs (polychlorinated biphenyls), a toxic substance used in electrical equipment before 1977. The information is contained in an environmental impact report made public this week by the Empire State Development Corp.

Workers at the site are executing a two-phase cleanup program developed with the state Department of Environmental Conservation. The cleanup is part of the initial excavation

work at the site to prepare for the planned reconstruction of a Con Edison substation and an office tower there by 2005. In the first phase of the plan, workers will excavate and remove soil to a depth of at least 10 feet in the 1.33-acre site, the report said. In the second phase, the southern two-thirds of the site will be excavated an additional 17 feet for a total of 27 feet.

Some of the oil was recovered from trenches, manholes, areas adjacent to the project site and even the basement of the Verizon building, the report said. In December, Con Edison bored into the soil in nine spots and sank groundwater-monitoring wells, finding oil in those tests including two of the wells. One well contained three inches of oil, and the other Under the cleanup plan, any groundwater exposed during the excavation will have to be treated before it can be pumped into the sewage system for disposal.

The site also contained two 6,000-gallon underground diesel storage tanks, formerly operated by Salomon Smith Barney. In October, DEC officials determined that the tanks were breached in the collapses and a spill had resulted. The tanks were removed in early May, but petroleum had leaked into the soil by then. Workers are excavating the area around the tanks to remove the contaminated soil. Two 11,690-gallon diesel fuel tanks, operated by Silverstein Properties, also were in the structure. In February, DEC officials ordered Silverstein to close the tanks, and the tanks were removed in March and April, with no evidence of leakage present.

Steve Solomon, a spokesman for Silverstein Properties, did not return a phone call. Con Edison spokesman Mike Clendenin said low amounts of oil were found in groundwater wells, and an unknown quantity was burned and/or absorbed into the debris and previously removed.

[Oil Leaks Need Cleanup 2-stage plan already begun, 6/6/02, By Graham Rayman, Newsday]

2/1/02

When the World Trade Center crumbled, the spotlight was on its two majestic towers, not on 7 World Trade Center a building that stood and collapsed in their shadows.

But 7 WTC was toxic. It housed two electrical substations owned by Con Edison. And they contained 109,000 gallons (413,000 liters) of oil and hundreds of pounds (kilograms) of potentially dangerous chemicals set loose when the building fell. Trace amounts of PCBs, a carcinogen, and larger quantities of sulfuric acid, a possible carcinogen and respiratory irritant, were among the hazards. Details about some of the pollutants are contained in reports Con Ed made to the state Department of Environmental Conservation beginning Sept. 11. The Associated Press recently obtained the documents from Con Ed.

. . .

The red granite edifice of 7 World Trade Center, once connected to the twin towers by two slender footbridges, tumbled to the ground in a chain reaction several hours after suicide hijackers crashed into the towers. The attacks sent flaming debris hailing down on nearby buildings, igniting 7 WTC in an unstoppable blaze that leveled it. The collapse crushed electrical equipment within.

. . .

> The matter is a hot button because of public fears about PCBs, or polychlorinated biphenyls, a cancer-causing compound used as a fire retardant in the lubricating and insulating oil of electrical equipment built before 1977. The newer of Con Ed's two trade center substations was considered virtually PCB free, but the older one contained oil with trace amounts up to 50 parts per mill ion according to t he utility's environmental reports.
>
> Under EPA regulations, that ratio isn't high enough to be a hazard. However, some environmentalists say even tiny amounts of PCBs can cause harm. Unleashed in the environment, the chemicals gradually accumulate in the fat of fish and animals and then move up the food chain to people. People who are exposed to too much can develop cancer.
>
> . . .
>
> As for the 109,000 gallons (413,000 liters) of oil, it's a smallish spill by some standards more than 11 million gallons (42 million liters) of crude oil came from the 1989 Exxon Valdez accident, and a recent accident off the Galapagos Islands spilled about 240,000 gallons.
>
> . . .
>
> *[More chemicals feared at Trade Center site, 2/1/02, By SHARON L. CRENSON, Associated Press, http://www.enn.com/news/wire-stories/2002/02/02012002/ap_transformers_46283.asp]*

Study shows PCB's were deposited in films on windows from WTC implosion/fires

The following are excerpts from a study showing that PCB's were released to the air from the WTC fires, and the airborne PCB's were deposited on building surfaces, probably as an oily film:

> [A]n electricity substation, located underneath "7 World Trade Center", containing 492,000 liters of PCB contaminated transformer oil was destroyed.
>
> Household and building fires are known to produce high concentrations of toxic gases, including PCB, PAH, chlorophenols and polychlorinated bibenzodioxins and furans2,3. Surface wipes taken after household fires have measured very high contaminant concentrations, such as between 2.6 6.4 mg/m^2 for ΣPCB. *[Σ means the sum of, or total PCB's.]*
>
> We now appreciate that surface films develop on the interior and exterior of surfaces. The composition of surface films is representative of the particulate-associated and gas-phase contaminants that comprise the complex mixture of urban air. This paper presents the polychlorinated biphenyl (PCB) concentrations found in organic films from exterior building surfaces, namely windows. Seven sites were sampled in Lower Manhattan, with three sites located within ~0.5 km of the WTC, in addition to a control site in Brooklyn.
>
> . . .
>
> Organic film samples were collected from the outside of windows by scrubbing the surfaces with pre-cleaned laboratory Kimwipes, soaked in HPLC grade isopropanol . . . Sampling was conducted between October 27 and October 29, 2001.
>
> . . .
>
> Eight samples were collected from seven sites in lower Manhattan and at one location in Brooklyn. Samples were collected from either ground level or second story windows.

Three sites (Church/Warren, WTC East and the paired Museum-North and Museum-South) were located within 0.5-0.75 km of the WTC and were expected to be most immediately impacted by the contaminant plume. The windows at these sites directly faced the WTC, with the exception of Museum-South that faced directly away. The remaining four Manhattan sites (Worth/ Broadway, Canal/Broadway, NYU and Union Square) were located along a north-south transect northward from the WTC. The furthest site, Union Square, was ~4 km from the WTC. The Brooklyn location, which served as a control site, was approximately 3.5 km away from the WTC. The last time of cleaning was before September 11, 2001.

. . .

Total PCB concentrations decreased with increasing distance from the WTC site (see Table 1) with the highest concentrations measured at the three sites near the WTC. The highest PCB concentrations were measured in the two samples from the Museum site, a building located just south of the WTC, the direction of prevailing winds for several days after September 11th. These concentrations were nearly three times greater than the Church/Warren site, which was located closer to the WTC than the Museum site, but to the north. Paired samples were collected on the north (Museum North Side) and south (Museum South Si de) facing windows at the Museum site, corresponding to the sides of the building that directly face and face away from the WTC, respectively. The total PCB concentration on the Museum North windows were about 10 % greater than south facing windows. This is a minimal difference and indicates that the atmospheric plume was relatively well mixed at close range.

. . .

Location	[Total] PCB (ng/m^2)	Distance from WTC (km)
Museum North Si de	1398	0.75
Museum South Si de	1260	0.75
Church/Warren	404	0.5
Park Row/Spruce	105	0.75
Worth/Broadway Street	511	1
Canal/Broadway Street	107	1.5
NYU	10	2.75
Union Square	89	3.5
Brooklyn	82	4

. . .

[POLYCHLORINATED BIPHENYL (PCB) CONCENTRATIONS IN ATMOSPHERICALLY DERIVED ORGANIC FILMS FROM LOWER MANHATTAN AFTER SEPTEMBER 11, 2001, Craig M. Butt, Jennifer Truong, Miriam L. Diamond and Gary A. Stern, FORMATION AND SOURCES: FIELD CASES, ORGANOHALOGEN COMPOUNDS Vol. 59 (2002) 219]

EPA finds high PCB levels in dust, states concern in EPA report, then claims it was a typo

EPA's 9/02 peer review draft document, *Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks* was posted on the internet for public comment.[75] It discussed the levels of PCB's and other contaminants that EPA found in WTC dust as well as air.

It referenced another EPA document where test results for PCB's in dust were given. The document for the PCB in dust data is EPA's Special Audit 14. This EPA report gave extraordinarily high levels of PCB's in WTC dust, and expressed concern over the elevated levels in the conclusion section of the Special Audit 14. The date of EPA's *Special Audit 14* is October, 2001.

Polychlorinated Biphenyls (PCBs) in Bulk Dust and Air Samples

Aroclor 1254 and Aroclor 1260 results from the WTC database reveal high levels of Aroclor 1260 in several bulk dust samples from several sampling sites. Three (3) of the seven (7) samples listed in Table 2 were found to contain Aroclor 1260 at levels greater than 1000 mg/Kg (ppm). Aroclor 1254 results were generally lower or not detected. No PCB congener or Total PCB results for bulk dust samples have yet been found. PCB congener results for September 20 water samples were found but have not been evaluated.

Table 2. Aroclor 1260 and Aroclor 1254 Results, Sept. 16 Bulk Dust Samples, Units: mg/Kg (ppm)

Location	Aroclor 1254	Aroclor 1260
110 Greenwich Street	< 0.740	< 0.740
22 Cortlandt	0.550	1.20
600 Gateway Plaza	0.170	1.50
Albany St & West St (WTC)	not detected	1400
Battery Pk & 2nd Pl	not detected	1600
North End & Park Pl	not detected	1100
Park Place & West Broadway	not detected	159

. . .

CONCLUSIONS AND RECOMMENDATIONS

Examination of the NYC Response Monitoring database and the results discussed here suggest several important conclusions:

. . .

Several very high concentrations of many toxic compounds were detected in the bulk dust samples, including CDD/CDF, PCBs, PAHs, and metals.

. . .

[emphasis added] [Special Investigative Audit #14: Environmental Data Trend Report, World Trade Center Disaster; Final Update - Trends for Data Collected 9/11/01 to 4/24/02 from Lower Manhattan, Prepared by IT Corporation for Office of Emergency and Remedial Response. - (Draft Version - October 2001), posted at http://www.nycosh.org/WTCdraft2_102901.pdf]

In December, 2002, I distributed a copy of EPA's Special Audit 14 to many outside parties. At this time, EPA's Special Audit 14 was not in any way an internal document. EPA was confident enough in the results contained in *Special Audit 14* to make it an official supporting document for its 10/02 peer review draft, *Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks*, which was posted by EPA on the internet. EPA was well aware of the conclusion section of *Special Audit 14*, which stated a concern for the very high PCB concentrations.

After drawing public attention to the fact that EPA had found high PCB levels in WTC dust, EPA suddenly claimed that the high PCB levels were only typographical errors!!!

Regardless of whether the data was a typo or not, we were only made aware of the high PCB levels after seeing EPA's *Special Audit 14* when it became one of the supporting references for EPA's 10/02 draft *Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks* document. EPA had this data for over a year and did nothing. *Special Audit 14* discussed concern over the high PCB levels, and also discussed the fact that there were several other toxic constituents that were present in very high levels, like dioxins, PAH's, and metals. EPA is not claiming any typographical errors for these instances. But EPA has done nothing to either alert the public or conduct further testing.

Furthermore, EPA did not release the high PCB data for the sampling date of 9/16/01 to the NY Environmental Law and Justice Project (NYELJP) in 10/01, although it had released a large amount of other data for earlier and later dates. The NYELJP had posted all the data EPA provided in 10/01 on their website at www.NYenviroLAW.org, and all of this data is still posted at the NYELJP website. The 9/16/01 data was excluded by EPA.

To this day, EPA has not provided adequate proof that the high PCB data was in fact a typographical error. They did supply a summary data sheet which showed lower PCB levels, where a decimal point was transposed. However, this is not proof. EPA would need to supply all the original data as generated by the GC/MS itself, affidavits, and certifications from the laboratory as to the point in the chain of reports where the data was incorrectly transposed.

Even then, EPA's late day claim that some unidentified laboratory or other contractor made a typographical error is suspect.

Polynuclear Aromatic Hydrocarbons (PAH's)

PAH's (polynuclear aromatic hydrocarbons) inside buildings were sometimes above EPA levels of concern. For one apartment in EPA's 110 Liberty St. pilot cleaning study, PAH's were above EPA's benchmark.[76] The calculated toxicity equivalent factor (TEF) was 303.5 $\mu g/m^2$, above

EPA's primary clearance criterion of 300 $\mu g/m^2$.

EPA's *Special Audit 14* also concluded that PAH levels were very high in WTC dust:

> CONCLUSIONS AND RECOMMENDATIONS
> Examination of the NYC Response Monitoring database and the results discussed here suggest several important conclusions:
> . . .
> Several very high concentrations of many toxic compounds were detected in the bulk dust samples, including CDD/CDF, PCBs, PAHs, and metals.
> . . .
> *[emphasis added] [Special Investigative Audit #14: Environmental Data Trend Report, World Trade Center Disaster; Final Update - Trends for Data Collected 9/11/01 to 4/24/02 from Lower Manhattan, Prepared by IT Corporation for Office of Emergency and Remedial Response. - (Draft Version - October 2001), posted at http://www.nycosh.org/WTCdraft2_102901.pdf]*

Caustic

EPA withheld critical data about the caustic nature of WTC dust. On the "pH scale," WTC dust was as caustic as drain cleaner. The following are excerpts from Pulitzer Price winning journalist Andrew Schneider, as well as another account:

> 2/9/02
> Even as the dust from the collapsed World Trade Center was still settling, top government scientists were determining that the smoky gray mixture was highly corrosive and potentially a serious danger to health.
>
> The U.S. Geological Survey team found that some of the dust was as caustic as liquid drain cleaner and alerted all government agencies involved in the emergency response.
>
> But many of those on the front lines of protecting the health of the public and workers cleaning up the site say they never got the information.
>
> "I'm supposed to be in the loop, and I've never heard any specific numbers on how caustic the dust actually was," said Dr. Robin Herbert, co-director of the Mount Sinai Center for Occupational and environmental Medicine. "There is a large segment of the population here whose physicians needed to know that information that USGS submitted. Exposure to dust with a high pH could impact everyone, but especially the very young, the very old and those with existing pulmonary disease."
>
> Census data show large concentrations of young and elderly living near the World Trade Center site.
>
> The EPA's office in New York said it repeatedly told the public that the dust was caustic because of tenement that was pulverized when the towers collapsed. But an examination of all the EPA's public and press statements made since Sept. 11 found nothing that

warned of the very high pH levels found by the Geological Survey scientists. Nor did the statements disclose the specific levels that the EPA's own testing found.

"We've not heard of EPA or anyone else releasing information on specific pH levels in the dust, and that's information that we all should have had," said Carrie Loewenherz, an industrial hygienist for the New York Committee for Occupational Safety and Health, which provides assistance to more than 250unions.

"It's the specific numbers - those precise pH levels - that we need to make the appropriate safety decisions for the workers, and they were never released," Loewenherz said. "The dust, once it's in contact with moist tissue, the throat, the mouth, nasal passages, the eyes and even sweaty skin, it becomes corrosive and can cause severe burns."

Most of the samples taken by USGS' team had a pH of 9.5 to 10.5, about the same alkalinity as ammonia. Two samples that were taken inside a high-rise apartment and in a gymnasium across from the wreckage of the World Trade Center had a pH of 11.8 to 12.1 - equivalent to what would be found in liquid drain cleaner.

. . .

The Geological Survey's test results were posted Sept. 27 on a Web site restricted to government agencies.

The USGS findings were "evaluated by our technical experts and found to be consistent with the findings of EPA's Office of Research and Development," said Bonnie Bellow, the agency's spokeswoman in New York."The USGS data was also discussed by an interagency group of scientists, epidemiologists and health officials," Bellow said.

But neither the EPA headquarters nor its New York office would comment on what came out of these discussions or which EPA results they were "consistent" with. The USGS data on pH levels were not released by the EPA, nor apparently were the environmental agency's own test results on the dust.

"It is extremely distressing to learn that the EPA knew how caustic samples of the dust were and didn't publicize the information immediately, or make sure that OSHA publicized it," said Joel Shufro, executive director of the New York Committee for Occupational Safety and Health.

"If we had known at the time exactly how caustic the dust could be, we would have been in a better position to make informed decisions about respiratory protection to recommend and about the urgency of ensuring that workers and residents followed those recommendations," Shufro said. "It is inexcusable for EPA to have kept silent for so long about such a potential hazard."

. . .

Dust weakens strapping youth

John Healy Jr. is 15, big, taller than his father. He looks as strong as a bull. But when he talks, wheezes and deep coughs punctuate his words. He and his father, John, live in an apartment overlooking what was the World Trade Center.

"Something is tearing him up, hitting his lungs hard," said his father. "He had asthma when he was younger, but he was fine until after Sept. 11. If I knew the dust was that caustic, there's no way I would have brought him back here."

. . .
"I can't understand why the government didn't tell us what was actually in the dust," Healy said. "Were they afraid we were going to panic? I needed that information to decide what was best for my son. needed it."

The teen's malady and other serious problems are being seen by physicians throughout New York. "What we're finding is incredible irritation to the lungs, throat and nasal passages," said Herbert, from Mount Sinai. "Some of the tissue is cherry red, vivid, bright, and we've never seen anything like it before.

"There are a large number of clinicians and public health specialists who are struggling to reconcile the health problems they're seeing with the exposure data they're being given," Herbert said. "The high pH in the dust may be a part of the answer. If the government had these pH readings of 11 and 12, the public and their physicians should have been told. "Any credible information the government had relating to health issues just should have been released," she said. "There is no justification for holding it. You don't conceal the information from those who need it."

A dubious honor

Mark Rushing and Tori Bunch have the debatable honor of having lived in one of the sites that USGS tested. In fact, their apartment on the 30th floor of a building overlooking the World Trade Center tied for highest pH - 12.1 - of the dozens of sites where samples were collected.

"It's obvious to those of us living here that the government - city, state and federal - wanted things to return to normal as quickly as possible. The economic losses were great," Rushing said. "But no matter how you view it, that's no excuse for the government, any government, to conceal hazards from the people they are charged with protecting."
. . .
Cate Jenkins, a senior environmental scientist in the hazardous materials division at the EPA headquarters, said: "The pH levels the USGS documented were far too high for EPA to ignore. They insisted that all the information regarding health and safety was being released to the public. Well, that's not true. There's nothing, internally or in public releases, that shows the agency ever disclosed specific pH levels."

Late Thursday, the EPA's Bellow told the Post-Dispatch: "We have no specific data on pH levels." Bellow added, "This is all the available information on the subject."

Late Friday, the EPA responded to the question of why it didn't collect its own pH numbers. "EPA had enough information about the alkalinity of the material from the World Trade Center without doing further analysis," Bellow said.

The question of why EPA didn't release the data it had had remains unanswered.
. . .
[Government withhold data on dangers in NYC dust, By Andrew Schneider. ST. LOUIS POST-DISPATCH, 2/9/02]

2/12/02

A US Geological Survey team found last September that some of the dust from the site was as caustic as drain cleaner, because of the high concentration of cement dust, an alkaline substance. The team's conclusion, which was reported Sunday in the St. Louis Post Dispatch, was sent to several government agencies in late September, but none of them made the finding public.

. . .

[Concerns intensify on ground zero dust, By Fred Kaplan, Boston Globe, 2/12/2002]

Beryllium and other toxic metals

As discussed earlier, EPA's *Special Audit 14* concluded that many metals were very high in WTC dust. Thus, logically, EPA should be testing for these in apartments and elsewhere. In addition, the expert peer panel convened by EPA recommended that metals should be tested by EPA in its voluntary residential cleanup program.

Another panel member noted that the document authors had considered dust resuspension in setting criteria, but based on this panelist's prior work, beryllium was consistently identified in settled dust. The panelist noted that this finding is supported by the concentrations of beryllium reported by Lioy et al. (2002) in bulk dust samples. The panelist further noted that if normalized on the basis of mass per unit surface area, then levels observed in the independent studies are slightly greater than the lower limit established in Department of Energy Guidelines (DOE, 1999). The panelist suggested that based on the concentrations observed and the inherent toxicity of beryllium; this metal should be included as a COPC. The panelist noted that beryllium might have been screened out due to the low frequency of detection. The panelist noted, however, that if additional apartments were being screened with analysis of a full suite of metals, then whether beryllium is a consistent problem would become apparent. Another panel member agreed that if beryllium were present it would warrant a closer look, although he noted some concerns about the specific calculation of risk values using the DOE methodology regarding transfer, but noted that other methods could be employed.

. . .

[World Trade Center (WTC) October 21-22, 2002, Peer Review Meeting Notes, 2/7/03, Prepared by: Toxicology Excellence for Risk Assessment, Prepared for: U.S. Environmental Protection Agency, http://www.tera.org/peer/wtc/]

T: FAILURE TO PROTECT PUBLIC AT 1 in 1 MILLION CANCER RISK LEVEL

NEED TO FACTOR IN IMPACT OF EARLY WTC EXPOSURES

"EPA's conclusion that the air was safe is based on a 1 in 10,000 risk that someone will develop cancer from exposure to the WTC pollutants, and this was only for a limited set of POC's *[pollutants of concern]*. Is this risk level a level that the public or regulators consider safe? For air tonics, EPA has traditionally used 1 in 1 million as the definition of acceptable risk (they do not use the term "safe") and 1 in 100,000 as the action level when a regulated industry must undertake immediate corrective actions to abate health risks. (EPA allows cost considerations to influence controls chosen in between these two points).
. . .
"Health standards do not exist for cumulative impact of exposure to several pollutants at once – synergistic impact of air tonics unknown and little studied. EPA's pronouncement did not address short-term health impacts." ***[1/27/03 EPA IG report]***

EPA failed to set cleanup levels for asbestos and other toxic substances in WTC fallout at a combined, aggregate one-in-a-million cancer risk level (10^{-6} risk level) as required. EPA also only considered one toxic constituent, asbestos, for making its risk calculations.

The EPA IG is incorrect in believing that EPA does not have a method for addressing cumulative impacts from exposure to more than one pollutant at once. Under the NCP, there is a required method for calculating the combined aggregate impact of all carcinogenic and other toxic constituents as a combined group. Whether this method is totally sound scientifically is irrelevant. The NCP method is very conservative, with the legal impact of the applicable binding NCP regulations.

EPA also ignored the early exposures to WTC dust in calculating their risks. Citizens were exposed to extremely high amounts during those first hours, weeks, and then for more than a year. EPA chose to ignore all these past exposures and just calculate risks for the time that a person would be living in an apartment after it was cleaned up. It is as though the person was never prior exposed to WTC dust, and never was exposed to any other toxic substance for their entire lives. EPA assumed a "clean slate" for prior toxic exposures when calculated how clean an apartment should be after EPA's voluntary cleanup program.

As stated in the EPA IG report, this is against EPA policy and regulations. EPA has the

capability to test air and surfaces in apartments at lower levels of risk. Cost is not supposed to be a factor in the cleanup, according to the president.

Costs should not be consideration in the WTC cleanup, according to President Bush

The EPA IG report claimed that it was acceptable to consider costs as a factor in choosing not to cleanup to the 10^{-6} level:

> For air tonics, EPA has traditionally used 1 in 1 million as the definition of acceptable risk (they do not use the term "safe") and 1 in 100,000 as the action level when a regulated industry must undertake immediate corrective actions to abate health risks. (EPA allows cost considerations to influence controls chosen in between these two points).
> . . . *[EPA IG 1/27/03 report]*

This justification does not apply to the WTC cleanup. President Bush has made it clear that costs are not to be a consideration in this instance. In her 9/13/01 speech in New York City, EPA Administrator Whitman stated:

> "We're getting in there and testing to make sure things are safe," Whitman says. "Everything will be vacuumed that needs to be, air filters (in area buildings) will be cleaned, we're not going to let anybody into a building that isn't safe. And these buildings will be safe. The president has made it clear that we are to spare no expense on this one, and get this job done."
> . . .
> *[Newsweek, 9/14/01, Asbestos Alert, by David France and Erika Check, http://msnbc.com/news/629268.asp?0sp=w12b2&cp1=1]*
>
> _____
>
> "The President has said, 'Spare no expense, do everything you need to do to make sure the people of this city and down in Washington are safe as far as the environment is concerned,' " Whitman said.
>
> The dangerous toxins have dissipated to low, nonthreatening levels, she said, but probably will rise again briefly as workers move more debris. But the air is not hazardous except for people with respiratory conditions.
> . . .
> *[EPA CHIEF SAYS WATER, AIR ARE SAFE , New York Daily News; 9/14/01; SUSAN FERRARO]*

This is a promise to the people of NYC. It is no less than their due. The costs of any cleanup of the interior of buildings is minuscule compared to what has already been spent on recovering the remains of those who died directly in the WTC collapse and other non-health related expenses. The FEMA documents provide an overview and context for comparison of the relatively small magnitude of the costs for the EPA voluntary residential cleanup and testing program.

8/29/02

In the nearly one year since the terrorist attack on the World Trade Center, the Federal Emergency Management Agency (FEMA) has approved more than $4.5 billion to the state of New York through its public assistance program to reimburse state and city agencies for response and recover. Long-term recovery is expected to continue over the next several years, and FEMA anticipates that many additional project requests will be prepared and submitted for funding throughout this process.

. . .

The funding process, which involves several steps, begins at the city level with the development of project plans that qualify for public assistance funding. FEMA and SEMO work closely with the city's Office of Management and Budget throughout the process, which involves a multi-part review at the city level and a final review by FEMA.

Typically, the federal share of total eligible costs is 75 percent, with the state and local government providing 25 percent. In the case of the World Trade Center disaster, FEMA is funding 100 percent of costs eligible under the public assistance program, relieving the state of New York and New York City of any cost share.

Over 1,000 public assistance grants have been prepared to date, including:

Lower Manhattan Transportation Infrastructure

$2.75 billion to revamp lower Manhattan transportation infrastructure (in addition to $1.8 billion contributed by U.S. Department of Transportation for a total of $4.55 billion)

Debris Removal

$437 mi llion for debris removal

$90 mi llion for landfill operations and debris disposal

$96 mi llion for costs associated with insurance coverage obtained for debris removal activities

Emergency Transportation

$33 million for emergency ferry service

$15 million for additional emergency train service

$9.1 million for road repairs

$5.2 m illion for temporary pedestrian bridge and walkway

$1 million for emergency bus service

$315,000 for em ergency traffic operations

Cleaning and Air Monitoring

$80 million for indoor residential cleaning

$10 mi llion for exterior building cleaning

$2.9 m illion for air quality testing in schools (see Board of Education)

$4.1 m illion for environmental cleaning in City schools (see Board of Education)

Fire Department of New York

$105.6 million for Ground Zero overtime costs

$28.3 mi llion for destroyed vehicles and related equipment

$103.9 million for death benefits

$1.5 million for restoration of Engine 10 / Ladder 10 Firehouse

$2.3 m illion for cleaning fire apparatus

New York Police Department
$295.4 mi llion in overtime at Ground Zero, Fresh Kills landfill, and incident command centers
$5 mi llion for destroyed vehicles

NYC Board of Education
$2.9 million for air quality testing in schools
$4.1 million for environmental cleaning in City schools
$3.4 m illion for school relocation and transportation
$716,000 for textbooks

Private Not-for-Profit
$5.9 m illion for New York University for air monitoring, environmental cleaning and emergency educational supplies/services
$400,000 for P ace University air quality testing, emergency supplies and equipment repair and materials

Port Authority of New York and New Jersey
$28.8 million for overtime
$4 million for replacement of destroyed rail cars
$11.8 million for operating costs for emergency commuter ferry service

Other Direct Aid to New York City
$56 million for DNA testing, forensic analysis, equipment, and other tools for victim identification
$7.5 m illion for NYC Family Center
$12.9 mi llion for emergency supplies, equipment and services
$2.6 million for pedestrian walkway, mold remediation, and emergency response
$8 mi llion to NYC for cancelled elections
$43.8 mi llion to NY State Police for Ground Zero security operations
$20 million to NY State Military and Naval Affairs for activation of National Guard
$17 million for temporary relocation of CUNY's Fitterman Hall

In addition to $4.5 billion in Public Assistance funding for the World Trade Center recovery efforts, FEMA has provided $317.3 million for emergency response activities, such as Urban Search and Rescue, and approved more than $260 million in assistance for individuals and families. In all, $5.5 billion has been approved to date for FEMA, SBA and New York state recovery assistance programs.

[emphasis added] [FEMA Public Assistance Program Rebuilds New York, Release No.: FEMA-1391-DR-NY-PR-145, 8/29/02, http://www.fema.gov/diz01/d1391n145.shtm]

10/24/02

The Federal Emergency Management Agency (FEMA) and the New York State Department of Labor announced today that the approval rate for those requesting financial aid through the state-administered Individual and Family Grant (IFG) program is just under 89 percent. Through October 24, the IFG program has received 95,147 applications for assistance as a result of the World Trade Center Disaster.

Approximately 89 percent of the cases have been approved for nearly $24 million in assistance. Of the 84,583 cases approved, 24,427 have already received assistance. An additional 60,156 cases have been approved to receive assistance, pending the applicants' submission of receipts or other documents. The balance consists of ineligible or withdrawn applications (5,209), or cases that are currently being processed at IFG offices (5,355).

The IFG program is designed to help residents from federally declared disaster areas cover the costs of disaster-related necessary expenses or serious needs that are not covered by insurance or other assistance programs.

. . .

Under IFG guidelines for the World Trade Center (WTC) disaster, residents of New York City may apply for assistance for home repairs, replacement of personal property, and reimbursement for air quality equipment -- i.e. air purifiers, air filters, vacuum cleaners with HEPA filters, and repair or replacement of air conditioners. While a number of applicants who lived or worked near the WTC site have been reimbursed for home repairs and damaged or lost personal property, the vast majority of IFG applicants have requested assistance with the purchase of air quality equipment.

. . .

[emphasis added] [FEMA, Disaster Assistance Approval Rate Nears 89 Percent for IFG Program; FEMA Provides Support to Enhance New York State Efforts, Release No.: FEMA-1391-DR-NY-PR-163, 10/24/02, http://www.fema.gov/diz01/d1391n163.shtm]

12/17/02

FEMA Director Joe M. Allbaugh released funding projections for response and recovery costs associated with the World Trade Center today. The projections forecast how the $8.8 billion allocated to FEMA will be spent as part of the $20 billion allotted by President Bush and Congress in the days immediately after September 11.

The projected commitments include funds obligated for specific projects as well as amounts designated for pending projects. FEMA worked with the city and state of New York to finalize eligible projects and costs for federal reimbursement. "The projects and programs covered in these projected commitments may take several years to run the course, so it is important to set aside the appropriate funds now," said Allbaugh.

Based on the projected commitments, FEMA estimates that over $4.2 billion will go towards public assistance projects that include debris removal, emergency protective measures and the repair or restoration of damaged public facilities. An additional $2.75 billion has been approved to revamp Lower Manhattan's transportation infrastructure damaged during the World Trade Center attack. FEMA estimates that approximately $500 million is being spent to provide assistance to individuals and families affected by the attack through such programs as FEMA's Mortgage and Rental Assistance, Individual and Family Grants, and Crisis Counseling.

. . .

[FEMA, FEMA Releases Projected Costs For World Trade Center Response And Recovery, Release No.: FEMA-1391-DR-NY-PR-183, 12/17/02, http://www.fema.gov/diz01/d1391n183.shtm]

5/15/03

The Federal Emergency Management Agency (FEMA) obligated an additional $40,502,483 to the state of New York to help New York City continue its long-term recovery from the World Trade Center (WTC) attack. With the new grants announced today, the total funding obligated through FEMA's Public Assistance program is $2.28 billion.

"New York City's response and recovery efforts after September 11th demonstrated a determination that inspired the entire nation," said Under Secretary Michael D. Brown of the U.S. Department of Homeland Security and FEMA. "FEMA is committed to fulfilling President Bush's pledge to support New York in its long-term recovery from the attack by providing funds to the city agencies that played such a critical role over the past 20 months."

The grantees in this round of federal funding include:

. . .

$5,186,145 reimbursing the DOE for contracted services required to inspect, test and abate contaminated areas, including the ventilation system and auditorium, at Stuyvesant High School at Chambers and West Streets.

. . .

[emphasis added] [FEMA, FEMA Releases Grant Funds For World Trade Center Recovery Costs, Release No.: 1391-207, 5/15/03, http://www.fema.gov/diz01/d1391n207.shtm]

6/5/03

The Federal Emergency Management Agency (FEMA) obligated an additional $46,935,242 today to the state of New York to assist the city of New York in the long-term recovery from the attack on the World Trade Center (WTC).

. . .

Port Authority of New York and New Jersey (PANYNJ)

$10,806,970 f or replacement of the voice telephone network that was lost when the Port Authority's headquarters were destroyed in the collapse of One World Trade Center.

$9,576,139 f or desktop computer systems, laptops and servers to replace equipment lost in the Port Authority's WTC headquarters.

$4,435,923 reimbursing the Port Authority for overtime labor costs associated with performing emergency response activities.

$2,459,895 f or replacement of the Port Authority's 800 MHZ radio system and associated installation costs in locations around the metropolitan area.

$2,146,563 reim bursing the Port Authority for costs related to the replacement of electronic office equipment such as photocopiers, printers, fax machines, document scanners, image projection equipment and associated supplies, all destroyed in the collapse of the World Trade Center.

$1,142,093 f or costs associated with the procurement of radio equipment used for emergency work, including handheld radios, mobile radios for Port Authority vehicles, batteries, chargers and other related items.

Fire Department of New York (FDNY)

$3,810,674 f or supplies needed to support disaster-related emergency work including firefighting, search and rescue, inspections and victim notification and identification.

$3,424,453 for overtime and backfill for uniformed department members' disaster-related administrative duties.
$1,130,989 f or disaster-related overtime expenses incurred by FDNY employees performing emergency response activities at the WTC site, the Office of Chief Medical Examiner, and the Staten Island Landfill.

New York City Police Department (NYPD)
$1,554,262 reimbursing the city for benefits paid to the families of uniformed police officers who died while responding to the attack on the World Trade Center.

New York City Department of Environmental Protection (DEP)
$5,144,727 reim bursing the DEP for funds expended to date for the lower Manhattan residential clean-up program.

New York State Emergency Management Office (SEMO)
$1,302,554 for disaster-related relocation expenses incurred by the Legal Aid Society. The society's centralized data hub, which was located at 90 Church St. in lower Manhattan, was extensively damaged in the 9/11 attack. A subsequent decision was made to create a new data hub in Lake Success, N.Y. The data hub serves 28 different Legal Aid Society sites in the greater New York metropolitan area.
. . .
[FEMA, FEMA Releases Additional $46.9 Million To Assist In WTC Recovery Process In New York City, Release No.: 1391-208, 6/5/03, http://www.fema.gov/diz01/d1391n208.shtm]

10^{-4} risk level based on false premise that EPA could not test for 10^{-6} risk level

EPA set the 1 in 10,000 cancer risk level based on its alleged inability to test for asbestos in air at lower levels:

EPA is committed to setting the most stringent standards that can be technically achieved when testing residences for asbestos in air. We have set an initial risk-based clearance level for asbestos of 0.0009 fibers per cubic centimeter (f/cc). This means that if 10,000 people are exposed to this level of asbestos for 30 years, there may be one more case of cancer than if the group had not been exposed at all.
. . .
[EPA, Fact Sheets, Dust Cleanup Details, http://www.epa.gov/wtc/factsheets/index.html]

EPA will conduct followup testing for asbestos in the indoor air after the cleanups are completed. The Agency will assess the testing results using a federal health benchmark or level that assumes a thirty year exposure. This means that if a population of 10,000 people is exposed to a level of asbestos above the benchmark for a period of thirty years, there would be one additional case of cancer beyond what that population would normally expect to experience.
. . .
[Scroll to "Cleanup" on this EPA web page:

http://www.epa.gov/wtc/dustcleanup/factsheets/plan.html]

EPA's original rationale for abating only to the 10^{-4} risk level was testing difficulties

EPA prepared a document in conjunction with the Indoor Air Task Force including EPA, ATSDR, and other public sector environmental professionals, which described a rationale for only testing asbestos and other carcinogens at the 10^{-4} risk level (1 excess cancer per 10,000 exposed people). The rationale was that testing air for asbestos at the 10^{-6} level (1 in one million risk level) would be impractical, since it would require collecting an air sample 100 times the volume of a sample needed to measure the risk from asbestos at the 10^{-4} risk level.

This "practicality" rationale is the equivalent of saying that it would cost too much to test at the 10^{-6} risk level. As noted earlier, President Bush made the promise that no expense should be spared in the cleanup of NYC after the WTC attack.

This rationale was explained in detail in the 9/02 draft document for peer review "World Trade Center Indoor Air Assessment: Selecting Contaminants of Potential Concern, and Setting Health-Based Benchmarks":

> For carcinogenic compounds, the benchmarks were set so that a local resident's lifetime risk of developing cancer from exposure to WTC-related contaminants would not exceed a one-in-ten thousand probability ($1x10^{-4}$) above the resident's background risk without this exposure.
>
> . . .
>
> The cancer risk level ($1x10^{-4}$) employed herein reflects the upper bound of the acceptable risk range (10^{-4} to 10^{-6}) established in EPA's Superfund regulation [Federal Register, 1990]. Practical Quantitation Limits (PQLs, the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating procedures [EPA, 1992]) and anticipated background levels [ATSDR, 1995] dictated the selection of the risk level at $1x10^{-4}$. A more detailed discussion of this subject can be found in Appendix C.
>
> . . .
>
> APPENDIX C Basis for Tier III screening level of 1 E-04 *[10^{-4} risk level, or 1 in 10,000 cancer risk]*
>
> . . .
>
> All protocols chosen are designed to reach the lowest level of detection that is reasonable for the established methods. For Dioxin, Asbestos and PAHs, the sampling and analytical protocols are designed to reach detection limits that represent risk estimate levels of 1 E-04. To reach risk estimates of 1E-06, extraordinary modifications would have to be employed. These modifications would either have to be incorporated into the analytical protocols to increase the sensitivity of the required instrumentation, incorporated into the sampling protocols to achieve a larger sample, or a combination of both. For the Chemical of Potential Concern (COPC) list, the analytical protocols chosen are already incorporating the maximum sensitivity of the instrumentation. Therefore, the only legitimate mechanism to lower the overall limits of detection is to modify the sampling protocol. The two means of achieving this goal are to either run the sampling

> equipment (pumps) at a higher flow rate, or for longer periods of time. For the COPC list modifying flow rates would involve operating the equipment to achieve flow rates on the order of 500 to 1000 liters per minute. The only equipment available to operate at such flow rates are large units that can not be brought inside a residence. Rates this high also present problems with creating excessive negative pressure for indoor environments, plus flow rates this high have not been tested using the sampling protocols, and there is high likelihood of having analyte breakthrough on the collection filters. Therefore, this is not practical. The other option is to run the equipment for long periods of time. Again with the list of Chemicals of Potential Concern, sampling periods of up to 800 hours (33 days of continuous operation) would be needed to reach the E-06 risk *[10^{-6} risk level]* detection levels.
>
> . . .
>
> *[World Trade Center Indoor Air Assessment: Selecting Contaminants of Potential Concern, and Setting Health-Based Benchmarks, Prepared by the Contaminants of Potential Concern (COPC) Committee of the World Trade Center Indoor Air Taskforce Working Group, peer review draft, 9/02, http://www.tera.org/peer/WTC/COPC%20-%20Final%20-%2009-12-02.pdf .]*

EPA peer panel provides EPA technique to overcome asbestos test problem, tandem testing

EPA convened a peer review panel of outside experts to review and advise it on the selection of the 10^{-4} risk level, testing, and other matters related to the WTC cleanup of indoor air. Citizens affected by the WTC disaster were given an opportunity to nominate candidates to sit on this peer review panel, and suggested candidates were included. The peer review panel process was managed by an outside non-profit group, TERA, and all reports can be found at www.tera.org/peer/WTC . A meeting of the peer review panel was held in NYC on 10/21 - 22/02, and the public was allowed to observe.

The peer review panel did not agree with EPA's rationale for the less protective 10^{-4} risk level for asbestos and other carcinogenic WTC constituents. The panelists suggested using more than one sampling device so as to avoid the problem of filter overload. This would be a sequential tandem testing strategy. If a filter contains too much particulate in addition to asbestos, because a larger volume of air is pulled through the filter, the laboratory analyst would be unable to detect asbestos fibers that are obscured by the other particulates. Using 2 or more different pumps would overcome this problem, since there would be 2 or more filters for the laboratory to count for asbestos fibers, which would be much less likely to be overloaded.

However, the formal meeting notes[77] did not include these discussions by the expert panel, for some unexplained reason.

EPA claims peer panel tandem test method for asbestos only "theoretically" possible

EPA responded to peer panel comments, claiming that the sequential "tandem testing" method was only theoretically possible:

> Executive Summary . . .
> [S]everal panel members disagreed with the rationale provided in the document (limitations in the sampling methods) for using an upper limit excess lifetime cancer risk level of $1x10^{-4}$ in calculating the criterion for each tier.
> . . .
> It was noted that the $1x10^{-4}$ criterion was based on limitations in the available sampling methods
> . . .
> The panel discussed the decision to use a $1x10^{-4}$ risk level for developing the risk-based criteria, noting that the rationale for this choice was apparently a limitation with air sampling approaches for asbestos. The panel suggested that this limitation would not preclude using a different risk level for the asbestos dust pathway or for other COPC. In addition, several panel members commented that the rationale provided in the document for the choice of a $1x10^{-4}$ risk level was not convincing.
> . . .
> Key recommendations regarding the Tier Criteria and Benchmarks included the following:
> . . .
> "Panel members disagreed with the rationale provided in the document for using an upper level excess lifetime cancer risk level of $1x10^{-4}$ in calculating the benchmarks for each tier. The panel noted that the sampling and analysis limitations described in the document for asbestos that limit the risk evaluation to a $1x10^{-4}$ risk level could be easily overcome and lower risk levels could be achieved for other COPC."
>
> Response:
> The level of 10^{-4} lifetime risk was chosen on the basis of practical sampling limitations particular for asbestos. The level specified by the document, 0.0009 fibers/cc, is near the practical detection level given the large scope of the WTC Clean-up Program. The reviewers suggested that a somewhat lower risk, perhaps as low as 10^{-6}, might be achieved by compositing multiple samples. Measuring to a risk level of 10^{-6} requires 100 times more air volume per sample.
> . . .
> The authors acknowledge that running multiple pumps concurrently, in theory, might mitigate overloading potential and reduce total sample time. The WTC Clean-up Program was set up such that every room in a residential dwelling (with a minimum of three samples) would need to meet the clearance criteria before the residence was deemed effectively cleaned. Given that more than 6,000 individual residences signed up for the cleaning test only program, the prospect of running multiple pumps to obtain a single sample was determined to be beyond practical implementation.
> . . .
> *[World Trade Center (WTC) October 21-22, 2002, Peer Review Meeting Notes, 2/7/03, Prepared by: Toxicology Excellence for Risk Assessment, Prepared for: U.S. Environmental Protection Agency, http://www.tera.org/peer/wtc/]*

EPA deletes my comments showing EPA has previously successfully used "tandem testing" for asbestos in Libby

As part of this peer review process, EPA invited participation and comments from the public. I, as well as others, supplied extensive written comments. EPA included a compilation of these comments from the public as "Appendix C - Observer Comments" attached to the formal written notes of the 10/21-22/02 peer expert review meeting.[78] Only the cover email to my written comments, addressed to the peer review panel, were included in Appendix C - Observer Comments.

My comments supplied documentation that was not known by to the expert peer panel, namely that EPA had and was using already using this same sequential "tandem testing" multiple pump method to test for asbestos in homes at the Libby, MT Superfund site. I also suggested using the EPA protocol of indirect transfer, another established, published EPA method of overcoming the overloaded filter problem, and successfully used by other researchers for WTC-contaminated air.[79]

EPA insured that my comments were omitted because they contradicted EPA's claim that sequential tandem testing was only a theoretical possibility. The members of the expert panel, while having the right idea, were unaware of these EPA precedents for using tandem sampling.

> 10/22/02
>
> For the Libby investigation, various methods were used to avoid the problem of low sensitivity and filter overload, which could prevent the reading of filter grid areas. A low flow rate (e.g., 0.5 L/min) pump was used in conjunction with collecting sequential samples to avoid filter overload. Sampling time was increased to several days if necessary in Libby, using a video monitor to insure that the sampling equipment was not tampered with, and checking the equipment every 4 hours to insure that the battery pack did not run out, etc. For some of the Libby air tests, 80,000 liters of air was sampled. (See Peronard, P. and C. Weis, US EPA (March 2001) Phase 2 Sampling and quality assurance project Plan, Revision 0 for Libby, Montana, Environmental monitoring for asbestos.)
>
> There are other methods to increase asbestos air analytical sensitivity. The HP Environmental study used indirect transfer for heavily loaded samples to overcome the problem of filter overloading which could occur with high volume samples. The AHERA TEM sampling and analytical methodology includes both indirect and direct methods for air measurements, and the HP Environmental study demonstrated that the indirect method did not break up any asbestos structure to yield abnormally high readings for the already highly pulverized WTC fallout. (See Granger, R. H., McKee, T. R., Millette, J. R., Chmielinski, P., and Pineda, G. (October 2, 2001) Preliminary Health Hazard Assessment: World Trade Center, HP Environmental, Inc., 104 Elden St., Herndon, VA 20170. . . . *[Jenkins, 10/22/02]*

EPA statutes require a cleanup to the 10^{-6} risk level whenever feasible

As summarized in several of my earlier memoranda, EPA requires a cleanup under the NCP to the 10^{-6} risk level for the combined aggregate carcinogenic hazards of all carcinogens:

> 12/19/01
> The EPA generally considers an upper-bound lifetime cancer risk to an individual of between 10-4 and10-6 as a safe range. A risk of 10-4 represents a probability that there may be one extra cancer case in a population of 10,000 (1 per 10,000). A 10-6 risk is the probability that there may be one extra cancer case in a population of one million people over a lifetime of exposure (1 per 1,000,000. The National Contingency Plan (NCP) (Superfund) requires that the 10-6 risk level should be the point of departure; the goal in any response by the EPA to ameliorate exposures to carcinogens from man-made sources. . . . *[Jenkins, 2/19/01]* j
>
> _____
>
> 2/11/02
> For carcinogens, the detection limit should be at or lower than the cancer risk at the 10^{-6} ("ten to the minus six") risk level. This corresponds to those levels found by EPA to be associated with a cancer risk of 1 in a million. It is EPA policy to evaluate human exposures to carcinogens at this level as "the point of departure" for any formal decision process for remediation that might justify exposing citizens to higher cancer risks, such as the 1 in 100,000 risk level (10^{-5} risk level); or the 1 in 10,000 risk level (10^{-4} risk level). At this point in time, the EPA has established no basis for justifying any higher risk level than the 1 in a million, or 10^{-6} risk level. Testing at this low level provides a greater degree of assurance that the substance is not present at levels where there would be health concerns. Furthermore, because several carcinogens are potentially present at levels of concern, it would not be sufficiently protective to test each carcinogen at the 1 in 10,000 risk level (10^{-4} risk level). This is because the carcinogenic risks of the all of the carcinogens could add up. If each is only tested 10^{-4} risk level, then the aggregate risk could be much higher than 1 in 10,000, which is always EPA's action level. For other hazardous substances, which are not carcinogens, the detection limit must be at or below the established EPA reference dose for humans (RfD), or the lowest observed effect level (LOEL) in any animal study divided by a safety factor of 10,000. . . .
> *[Jenkins, 2/11/02]*
>
> _____
>
> 3/11/02
> In the event of contamination, it is the policy and goal of EPA to clean up the environment to protect citizens from any increased risk of cancer at the 1 in a million cancer risk level for a lifetime exposure. This is called the "10^{-6} risk level," or the "ten to the minus six risk level."
>
> Exposing citizens after a cleanup to anything less than the 10^{-6} risk level is never done by EPA without due public process with opportunity for public input and review. EPA would never even propose deciding that citizens be exposed to higher risk levels than one-in-a-million without extensive environmental monitoring, considering all feasible

> options, considering whether or not there are relatively few citizens that would be exposed, etc. Regardless, in all cases, action by EPA is triggered by any risk greater than 1 in 10,000. . . . *[Jenkins, 3/11/02]*

EPA's 10^{-4} risk level for the WTC cleanup ignores past and concurrent exposures

Another problem with EPA's protecting citizens only at the 10^{-4} risk level (1 in 10,000 cancer risk) after the EPA cleanup is that it fails to take into account higher past exposures to WTC dust and to other lifetime exposures to other toxic substances. There would have been intense exposures for several hours to the initial dust cloud, and then higher exposures for the next weeks, days, and years before EPA finally cleaned up residences. Furthermore, it ignores any workplace exposures, whether in the past, present, or future.

The concentrations of asbestos in the initial intense dust clouds is unknown. The first attempts to measure asbestos and other tonics in air was by OSHA on 9/13. Then, Con Edison, the utility company, took extensive ambient air samples on 9/14. The first two days after 9/11 there were no air sampling measurements for asbestos at all. Then, any samples after this date were often meaningless, because the test filters became so overloaded that the laboratories were unable to count the asbestos fibers. When laboratories were able to determine air asbestos during this time period, it was only for air samples with the lowest concentrations of particulates. Thus, any test data results were highly biased to the low side.

Air monitoring in the days after 9/11 at Ground Zero also would not be representative of citizen exposures for several reasons. These measurements were in the open air, and after most of the pulverized asbestos and other debris had been dispersed over a large area surrounding Ground Zero. The dust and fumes during this time period right in Ground Zero were from the fires and not from the pulverized debris. On the other hand, citizens living and working in enclosed spaces containing the original WTC dust would be exposed to much higher levels of asbestos.

From EPA's 110 Liberty St. pilot cleaning study, it is probable that many of the apartments and offices had asbestos concentrations much higher than 0.01 f/cc (PCM), even after one professional cleaning. There is one apartment in Brooklyn Heights were air levels were over 0.01 f/cc (PCM) even after rigorous professional abatement. The Ground Zero Task Force study discussed elsewhere in this report found asbestos levels ranging from 0.048 to 0.063 f/cc PCM-equivalents in an apartment near Ground Zero under passive conditions with no human activities to stir up the dusts. The dust levels would have been described as "minimal" by EPA, since you could still see the writing on papers on a desk under the thin dust layer.

If it is assumed that a citizen is living or working in a contaminated office and residence with asbestos levels of 0.0155 f/cc (PCM), then they would already exceed EPA's 1 in 10,000 excess

cancer risk just for the period in which they waited for EPA's free voluntary cleanup. These risk levels are additive. Adding on the 30 year EPA risk level for living in the cleaned up apartment would be the equivalent of 2 excess cancers per 10,000. High exposures for the first hours and days after the WTC collapse would add on unknown, but additional incremental cancer risk.

Thus, EPA would not actually be protecting citizens at the 1 in 10,000 cancer risk level if they only cleaned up apartments nearly 2 years after 9/11 to a 10^{-4} risk level for only future exposures.

EPA and NYC DOH false claims that short term exposures do not lead to long term effects

The following are claims by both EPA and NYC Dept. of Health officials that short term exposures to asbestos and other toxic substances will not lead to any long term cancer risks. These claims serve to bolster EPA's desire that citizens should ignore their early exposures to asbestos and other tonics in the days and months after 9/11.

> 9/14/01
> Nonetheless, the agency and outside medical experts stress that asbestos exposure is only dangerous when it is continuous over long periods of time. The elevated amounts of asbestos pose little danger to New Yorkers who are not working in the rescue effort, they say.
> . . .
> *[Asbestos Alert. How much of the chemical does the World Trade Center wreckage contain? By David France and Erika Check, 9/14/01, NEWSWEEK WEB EXCLUSIVE, http://msnbc.com/news/629268.asp?0sp=w12b2&cp1=1]*
>
> _____
>
> 9/17/01
> In general, asbestos-related lung disease results only from intense asbestos exposure experienced over a period of many years, primarily as a consequence of occupational exposures. The risk of developing an asbestos-related illness following an exposure of short duration, even to high levels, is extremely low.
> . . .
> *[NYC DOH, Recommendations for People Re-Occupying Commercial Buildings and Residents Re-Entering Their Homes, 9/17/01, http://www.ci.nyc.ny.us/html/doh/html/alerts/wtc3.html]*
>
> _____
>
> 10/19/01
> But on Sept. 11, as with so many things, the EPA's world changed. Faced with a public health scare that could have sent thousands in Manhattan fleeing the city or jamming hospitals, the EPA decided to cough up the truth about asbestos. Its officials bent over backward to get out the message that asbestos was harmful only if breathed at high levels and over sustained periods of time. When reporters pointed out that some of the tests had exceeded the EPA's safety levels, the agency hurried to explain that this was a

"stringent standard based on long-term exposure" and repeated that the public was not at any real risk.

. . .

[The EPA Comes Clean on Asbestos, Federal officials stop chasing a phantom risk, Wall St. Journal, . BY KIMBERLEY A. STRASSEL, 10/19/01]

11/1/01

Although short-term irritant health effects may persist as long as smoke and dust are present near the site, levels of more hazardous contaminants in the air and dust in the nearby neighborhoods are not high enough or for long enough to cause long-term health effects.

. . .

[Jessica Leighton, Ph.D., Assistant Commissioner, Environmental Risk Assessment, NYC DOH, Before the NYC Committee on Environmental Protection, 11/1/01]

11/2/01

Jessica Leighton, an assistant commissioner at the city's Department of Health, said that while tests had recorded occasional spikes in the levels of various contaminants, including asbestos, at some locations at or near the site, long-term health risks are associated with consistent exposure over a 30-year period.

. . .

[Workers and Residents Are Safe, Officials Say, By DIANE CARDWELL, 11/2/01, New York Times]

11/2/01

A battery of government experts testified yesterday that environmental conditions around the destroyed World Trade Center pose no long-term health risks.

. . .

Assurances also came from Dr. Jessica Leighton, assistant city health commissioner for environmental risk assessment. Pressed by Council Speaker Peter Vallone (D-Queens), who asked if "people are safe at the present level," Leighton said: "As far as the science has shown us right now, that is absolutely correct."

. . .

[Pros: Safe to Breathe Near WTC, By FRANK LOMBARDI, NY Daily News, 11/2/01]

11/26/01

Asbestos exposure becomes a health concern when high concentrations of asbestos fibers are inhaled over a long period of time. Illness is very unlikely to result from a single, high-level exposure or from a short period of exposure to lower levels.

. . .

[Testimony of Kathleen Callahan, Acting Deputy Regional Administrator U.S. Environmental Protection Agency, Before the New York State Assembly, 11/26/01] [80]

In general, asbestos-related lung disease results only from intense asbestos exposure experienced over a period of many years, primarily as a consequence of occupational exposures. The risk of developing an asbestos-related illness following an exposure of short duration, even to high levels, is extremely low.

. . .

[Unknown date, currently posted on EPA web site at: http://www.ci.nyc.ny.us/html/doh/html/alerts/wtc3.html]

EPA official findings that short term exposures to asbestos cause cancer, contradicting EPA's claims after the WTC collapse

The EPA and NYC claims that short term exposures to asbestos are harmless contradict established EPA and other federal agency findings. The Agency for Toxic Substances and Disease Registry (ATSDR) found that even short term exposures to asbestos were of concern:

2001

While lung cancer and mesothelioma are generally associated with chronic exposure to asbestos, there are several studies that indicate that short-term exposures are also of concern. For example, it has been noted that workers exposed to asbestos for only 1 12 months had an increased risk of developing lung cancer a number of years later. In animals, mesotheliomas developed in two rats exposed to high concentrations of amosite or crocidolite for only 1 day. These data are not extensive enough to define the dose- or timedependency of health risks from short-term exposure to asbestos, but the data do indicate that short-term exposures should not be disregarded.

. . .

Acute-Duration Exposure. Only a few inhalation or oral studies have sought to determine the effects of short-term exposures to asbestos. There are no human data on noncancer effects after acute exposures, and no acute-duration MRLs have been derived. However, there is one study in animals in which a single exposure produced fibrosis of the lung (McGavran et al. 1989), and one study that suggests that a single high inhalation exposure might cause cancer (Wagner et al. 1974). This is a potentially important point, since some people might have one or two significant exposures to asbestos during their life.

. . .

Animal experiments could be designed to determine whether there are age-related differences in pulmonary responses to inhaled asbestos fibers (e.g., fibrosis, cell proliferation, gene expression, macrophage production of reactive chemicals). For example, adult rats have been shown to display, within 20 days, a range of dose-related changes in pulmonary inflammation indices, increases in pulmonary cell proliferation, and increases in the severity of pulmonary fibrosis in response to short-term inhalation exposure to asbestos concentrations of approximately 60 and 2,800 f/mL (Quinlan et al. 1994, 1995).

. . .

[TOXICOLOGICAL PROFILE FOR ASBESTOS, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, Public Health Service, Agency for Toxic Substances and Disease

Registry, September 2001, http://www.atsdr.cdc.gov/toxprofiles/tp61.html]

In 1986, EPA published a final rule under section 6(a) of the Toxic Substances Control Act (TSCA) controlling asbestos abatement projects. From the excerpt below, it is clear that EPA considers that even extremely brief exposures to asbestos can lead to cancer:

> 1986
> Most occupational studies have been conducted on populations exposed to high airborne concentrations of asbestos for long periods of time. However, short-term occupational exposures, have also been shown to increase the risk of lung cancer and mesothelioma (Ref. 9). In addition, there are many documented cases of mesothelioma linked to extremely brief exposure to high concentrations of asbestos or long-term exposure to low concentrations (Ref. 4).
>
> Direct evidence of adverse health effects from nonoccupational asbestos exposure also exists. Persons who lived in the household of asbestos workers have developed pleural mesothelioma and signs of asbestosis (Ref. 10). A number of mesotheliomas have also been documented among populations whose only identified exposure was from living near asbestos mining areas, asbestos product factories, or shipyards where asbestos use had been very heavy (Ref. 4).
> . . .
> Therefore, EPA finds that unregulated removal, enclosure, or encapsulation of friable asbestos material presents an unreasonable risk to human health and proposes to require that certain measures be taken to reduce the risk faced by asbestos abatement workers and persons using and visiting buildings during and after asbestos abatement activities. The finding is based on the following points:
>
> 1. The health effects from asbestos exposure are very serious. Asbestos is a demonstrated human carcinogen. The cancers caused by asbestos are usually fatal and cause much pain and suffering.
>
> 2. Available evidence supports the conclusion that there is no safe level of exposure to asbestos. This conclusion is consistent with present theory of cancer etiology and is further supported by the many documented cases where low or short-term exposure has been shown to cause asbestos-related disease.
> . . .
> *[FEDERAL REGISTER Volume 51, page 15722, ENVIRONMENTAL PROTECTION AGENCY AGENCY: (EPA) CFR Part 763, Toxic Substances; Asbestos Abatement Projects [OPTS-62044A; FRL 2965-7], 51 FR 15722, April 25, 1986]*

ATSDR and EPA have concluded that the total amount of asbestos inhaled, regardless of the time period, related to cancer risks

Rather than rephrasing what the ATSDR has concluded on short term asbestos exposures a second time, the following was contained in my 12/19/01 memorandum:

2/19/01

The Agency for Toxic Substances and Disease Registry (ATSDR) is part of the Centers for Disease Control. It develops toxicological profiles in response to the Comprehensives Environmental Response, Compensation, and Liability Act (CERCLA, or Superfund). These profiles are subjected to extensive review by the most prestigious scientists as well as being reviewed and commented upon by affected industries and the public. The ATSDR found that the "cumulative exposure," or total dose, was valid for predicting the probability of suffering health effects from asbestos. There was no "threshold" or safe level.

> A number of researchers have found that the occurrence of asbestosis and lung cancer correlates with cumulative exposure (that is, the product of concentration [PCM fibers/mL] multiplied by years of exposure). Therefore, human exposures are expressed below as PCM f-yr/mL.
>
> . . .
>
> [A] number of other studies indicate that lung cancer risk is linearly related to cumulative dose without any obvious threshold

In other words, it does not matter whether or not you got the same total dose over a short period of time at higher levels, or a long period of time at lower levels. The health effects will be the same.

. . .

A person would need to breath the following concentrations of asbestos for the following time periods to increase the risk by 1 in 10,000:

Total dose required to increase risk of mesothelioma by 1 in 10,000

fibers/milliliter	time period
1.616	1 week
0.124	3 months
0.062	6 months
0.031	1 year
0.0155	2 years
0.00062	50 years

The latest EPA Integrated Risk Information System (IRIS) report on asbestos[81] also bases its risk level on the total amount of asbestos inhaled, regardless of the time period of the exposure. The reason is that once inhaled, the harmful asbestos fibers remain in the body. This concept is also the basis for the heightened concern over any children's exposure to asbestos, because they will have a longer time to develop cancer from the continued presence of asbestos body burdens.

Thus, when EPA and the NYC DOH claimed after the WTC that only long term exposures to asbestos can cause cancer, they are contradicting established and peer reviewed EPA and CDC ATSDR policies and official positions.

10^{-4} risk level for asbestos alone ignores risk from other toxic WTC components – NCP regulations require considerations of aggregate risk from all toxic constituents

There are many other toxic substances in WTC dusts in addition to asbestos. EPA's use of a cleanup criterion only for asbestos ignores the synergistic effects of these other toxic substances.

Press coverage of the synergistic toxicity of multiple WTC constituents

The following are some early public statements about the other toxic constituents from the WTC disaster:

10/3/01

Although EPA has measured dioxin levels in and around the World Trade Center site that were at or above EPA's level for taking action, the risk from dioxin is based on long-term exposure. EPA and OSHA expect levels to diminish as soon as the remaining fires on the site are extinguished.

. . .

[EPA press release, 10/3/01, www.epa.gov]

10/26/01

The effects of exposure to any hazardous substance depend on dose, duration, how the person is exposed, personal traits and habits, and whether other chemicals are present, according to the Agency for Toxic Substances and Disease Registry, a branch of the Department of Health and Human Services.

. . .

Until now, public attention has focused largely on the potential hazards of asbestos in the air. But the EPA records reveal that the release of toxic chemicals from the collapse of the twin towers and the subsequent subterranean fires has been far more extensive than first believed. Among the findings contained in the EPA documents:

--- Water discharged into the Hudson River from a sewer pipe at Rector St. on Sept. 18 showed dioxin levels more than five times higher than any previously recorded in New York Harbor by the state Department of Environmental Conservation. Monitors also found PCBs and dioxin levels in river sediment that were several times higher than a previous study of the river done in 1993.

--- A test of toxic metals in water discharged into the Hudson showed chromium, copper, lead and zinc at levels "elevated to several orders of magnitude above ambient water-quality criteria for most metals," according to the state monitoring agent who conducted the test. Because it was not raining that day, the inspector noted that the discharge was small and appeared to dilute quickly in the river.

--- On Sept. 23, lead levels in the air at three sites in lower Manhattan B arclay and West Sts., Church and Dey Sts. and at Ground Zero registered above the EPA standard for ambient air quality. At Barclay and West, the level of lead in the air was

nearly three times the EPA standard. Exposure to lead can damage the central nervous system, kidneys and other organs.

--- On numerous days, sulfur dioxide readings in the air at a half-dozen sites in lower Manhattan have been far higher than the EPA's ambient air quality standards. High levels of sulfur dioxide can aggravate health problems for asthmatics or people with respiratory problems and trigger allergic reactions in others. On Sept. 18, sulfur dioxide levels were so high that, according to one industrial hygienist, they were above the EPA's standard for a classification of "hazardous."
. . .
"Yes, they are high," said EPA spokeswoman Mary Mears, when asked to comment on the hazardous-substance readings contained in her agency's documents. "But you get a little distance from the plume and they go dramatically down."
. . .
"What I've seen of the data is troubling," said Paul Bartlett, an expert on PCBs and dioxins at the Queens College Center for the Biology of Natural Systems. He added that in his opinion, whatever monitoring the EPA has conducted has been inadequate. "Their detection limits are aimed at threshold levels for occupational exposure," Bartlett said. "They aren't treating this as a disaster, so they're not asking what extent and how far are people being exposed or who is possibly being affected by the releases of chemicals. They're just checking what emissions are exceeding regulations."

"I'm most concerned about the soup effect of all these toxic chemicals," said Monona Rossol, an industrial hygienist who works with the Environmental Law and Justice Project. "No one's worrying about the combination of these things on the workers."
. . .
"When we are finding these readings that have some significant level to them, they are primarily within the work area," said EPA spokeswoman Mary Helen Cervantes. "As for the cumulative impact of these chemicals, that is an area of science and study and research that we really have not developed methodologies to do that kind of assessment."
[emphasis added]
. . .
[A Toxic Nightmare At Disaster Site Air, water, soil contaminated, by Juan Gonzales, NY Daily News, 10/26/01]

10/26/01
Dear Administrator Whitman:

There is no doubt that we will be dealing with the impact of the September 11 terrorist attacks for months and years to come. I am especially concerned about the ongoing effect that the attacks on the World Trade Center may be having on human health and the environment. I would like to meet with you as soon as possible to discuss these concerns and to determine ways in which we can work together to make certain that all possible measures are being taken to adequately protect human health and the environment in lower Manhattan, and to ensure that the public is provided with sound information about environmental quality around "Ground Zero."

I was deeply alarmed by a report in today's New York Daily News that Environmental

> Protection Agency's own monitoring at, and around, Ground Zero has shown levels of benzene, lead, and sulfur dioxide in air samples that significantly exceed EPA and OSHA standards. The Daily News also reports that EPA has found high levels of dioxin, PCBs and metals in water being discharged into the Hudson River from the site. This is in addition to previous concerns regarding high levels of asbestos in air and dust samples at, and around, Ground Zero.
> . . .
> Sincerely,
>
> Hillary Rodham Clinton
> . . .
> *[letter from US Senator Clinton to EPA Administrator Whitman, 10/26/0, http://clinton.senate.gov/news/2001/12/2001C05A41.html]*

EPA NCP regulations establish methodologies for calculating aggregate, synergistic risk

The remediation of the contaminants from the WTC collapse are under the regulatory authority of the National Contingency Plan (NCP). This is explained in greater detail in Section V. EPA Region 2 has claimed that its risk assessment methodologies adhere to NCP and CERCLA guidance and regulations for the WTC:

> You asked for documents related to EPA's decision to establish a 10^{-4} risk over a thirty year period. This is within EPA's normal risk range of 10^{-4} to 10^{-6}. I have attached for your information a directive prepared by EPA's Office of Solid Waste and Emergency Response. This directive, entitled Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions, discusses the use of risk assessments in hazardous waste cleanups and the fact that it is acceptable under EPA policy to use risk ranges in the 10^{-4} range. Also, I am attaching a section of the National Contingency Plan (40 CFR Part 300 to 399) which further lays out that "acceptable exposure levels are generally concentration levels that represent an excess upper bound life-time cancer risk to an individual of between 10^{-4} to 10^{-6}."
> . . .
> *[letter from Mark Madeleine, EPA Toxicologist to Joel Kupferman, NY Environmental Law and Justice Project in response to a FOIA request, 6/12/02]*

This letter from EPA's Madeleine conveniently fails to include the following language from the same document it cites, EPA's "Role of the Baseline Risk Assessment." as follows:

> EPA uses the general 10(-4) to 10(-6) risk range as a "target range" within which the Agency strives to manage risks as part of a Superfund cleanup. Once a decision has been made to make an action, the Agency has expressed a reference for cleanups achieving the more protective end of the range (i.e., 10(-6)), although waste management strategies achieving reductions in site risks anywhere within the risk range may be deemed acceptable by the EPA risk manager. . . .
>
> *[Role of the Baseline Risk Assessment. This document may be found at: http://www.epa.gov/superfund/programs/risk/baseline.pdf]*

The following are excerpts from the NCP regulations, to which Maddaloni specifically refers to in his letter. The aggregate or cumulative carcinogenicity of all carcinogens must be calculated according to an established process under these NCP regulations. EPA Region 2 is violating the regulations by setting a risk level for an individual carcinogen like asbestos. The NCP regulations provide a strict protocol for calculating the aggregated carcinogenic risk of multiple carcinogens. This methodology is set forth in 40 CFR §300 Appendix A, Hazard Ranking System. These are EPA regulations, not guidance.

The methodology for multiple carcinogens under the NCP does not take into account whether or not different organ systems are the target of the carcinogenic action of multiple substances. This methodology under the NCP for addressing aggregate carcinogenicity is not mirrored in other EPA statutory authorities. It is not open to public debate given a particular remedial cleanup investigation. EPA statutes and regulations may be changed, but only through due process. EPA Region 2 is obligated under the law to implement the regulations as written.

> 40 CFR §300.430 Remedial investigation/feasibility study and selection of remedy.
> (a) *General* -- (1) *Introduction.* The purpose of the remedy selection process is to implement remedies that eliminate, reduce, or control risks to human health and the environment. Remedial actions are to be implemented as soon as site data and information make it possible to do so. Accordingly, EPA has established the following program goal, expectations, and program management principles to assist in the identification and implementation of appropriate remedial actions.
> . . .
> (e) *Feasibility study.* (1) The primary objective of the feasibility study (FS) is to ensure that appropriate remedial alternatives are developed and evaluated such that relevant information concerning the remedial action options can be presented to a decisionmaker and an appropriate remedy selected. . . .
>
> (2) Alternatives shall be developed that protect human health and the environment . . .
>
> (i) Establish remedial action objectives specifying contaminants and media of concern, potential exposure pathways, and remediation goals. . . . . Remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following:
>
> (A) Applicable or relevant and appropriate requirements *[ARAR's]* under federal environmental or state environmental or facility siting laws, if available, and the following factors:
>
> (*1*) For systemic toxicants, acceptable exposure levels shall represent concentration levels to which the human population, including sensitive subgroups, may be exposed without adverse effect during a lifetime or part of a lifetime, incorporating an adequate margin of safety;
>
> (*2*) For known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response. The

> 10^{-6} risk level shall be used as the point of departure for determining remediation goals for alternatives when ARARs are not available or are not sufficiently protective because of the presence of multiple contaminants at a site or multiple pathways of exposure; *[emphasis added]*
>
> . . .
>
> (D) In cases involving multiple contaminants or pathways where attainment of chemical-specific ARARs will result in cumulative risk in excess of 10^{-4}, criteria in paragraph (e)(2)(i)(A) of this section may also be considered when determining the cleanup level to be attained.
> *[emphasis added]*
>
> . . .
>
> 40 CFR §300 Appendix A, Hazard Ranking System. *[provides more detail on exactly how the risk assessment is performed for multiple contaminants. For carcinogens, the risk is additive, regardless of whether or not the same organ system is the target for carcinogenic action.]*

EPA expert panel recommended methodologies for assessing synergistic toxic constituents

EPA convened a peer review panel of outside experts. A meeting of the peer review panel was held in NYC on 10/21 - 22/02, and the panel suggested specific methodologies for EPA to address the synergistic effects of all WTC tonics. All reports can be found at www.tera.org/peer/WTC

Unfortunately, although well intentioned, these suggestions by the expert peer panel do not have the statutory and regulatory weight and obligatory burden of the NCP regulations for remedial risk assessments discussed above. The expert peer panel was undoubtedly unaware of the regulatory requirements under the NCP for multiple contaminants. Obviously, EPA was not motivated to educate them on this matter, because it would have been an admission that EPA had the legal requirement to address multiple toxic substances and calculate aggregate risk under the NCP.

> The panel also discussed the issue of mixtures. One panelist commented that based on the spectrum of effects and target organs involved with the list of COPC, as well as the very low concentrations, mixture effects are almost certainly not an issue for this exposure scenario (e.g., inhabitants of homes or offices). However, the consideration of mixtures and the rationale for concluding that the hazard posed by mixtures is de minimus needs further discussion in the document. Another panel member noted, however, that several of the COPC were lung toxicants. Another panelist noted that EPA Guidelines for Mixtures Risk Assessment provide an approach to use for addressing these issues, and also that EPA's MIXTOX database could be used as a source of data on assessing the potential for interactions among the COPC. The panel agreed that the document should more clearly describe how mixture toxicology was considered.
>
> . . .
>
> *[World Trade Center (WTC) October 21-22, 2002 Peer Review Meeting Notes, 2/7/03, Prepared by: Toxicology Excellence for Risk Assessment, http://www.tera.org/peer/wtc/]*

U: EPA INITIATIVE TO DOWNGRADE ASBESTOS RISK CLASSIFICATION

The World Trade Center contamination zone is the asbestos industry's battleground. What happens here shapes future cleanups of other asbestos sites as well as litigation in the years to come. There is legislation in Congress at this very minute that would prevent anyone exposed to WTC dust from ever collecting any compensation after contracting asbestos induced mesothelioma or lung cancer, because their exposures were not "work place related."

Chrysotile asbestos is the predominant form of asbestos found in WTC dust. Asbestos is a natural mineral, which occurs in several mineralogical forms, including chrysotile. The following discussion from the USGS report on the WTC is helpful:

> Chrysotile (includes the minerals clinochrysotile and orthochrysotile) is the only asbestos mineral of the serpentine group and has been the most widely used commercially. Chrysotile is a sheet silicate comprised of bundles of extremely small, tightly rolled sheets that form tubes or rods. Chrysotile has been more widely used than amphibole asbestos because it is usually more flexible, forms longer thinner fibers, and can easily be woven into cloth. Chrysotile is not as chemically inert as the asbestiform amphibole minerals.
>
> All other asbestos belongs to the amphibole family of minerals. Amphiboles are chain silicates that include over fifty different minerals, most of which do not crystallize in asbestiform varieties. Of the few amphiboles recognized to crystallize in asbestiform varieties, those that have been used commercially are grouped into five materials that are referred to both in commercial and regulatory nomenclature as; amosite (includes the asbestiform varieties of the amphibole minerals cummingtonite and grunerite), crocidolite (asbestiform variety of the mineral riebeckite), tremolite (asbestiform variety of the mineral tremolite), actinolite (asbestiform variety of the mineral actinolite), and asbestiform anthophyllite. Other amphiboles can occur in asbestiform varieties, but these minerals have generally not been used in commercial products and are often not cited in the regulatory literature.
>
> . . .
>
> *[US Geological Survey, Environmental Studies of the World Trade Center area after the September 11, 2001 attack, Open File Report OFR-01-0429 Version 1.1, http://pubs.usgs.gov/of/2001/ofr-01-0429/]*

EPA has begun major initiatives to downgrade its current carcinogenicity rating for chrysotile asbestos. The initiative also would classify all fibers smaller than 5 µm as being non-carcinogenic.

The first step in this process was the CDC's Agency for Toxic Substances and Disease Registry (ATSDR) developing an expert panel report outside of the normal peer review and public comment process. Then, EPA convened its own expert panel, containing the same scientists. Reports are being produced by both the ATSDR and EPA representing the opinions of this small, select group of experts. It all looks legitimate and part of the normal process, but it is not. The following describes the violations of the federal statutes by EPA and the ATSDR that have already

occurred.

The ATSDR and EPA use of an expert panel for a preliminary report is not illegal in and of itself, but it did not adhere to the requirements of the Federal Advisory Committee Act (FACA) for sufficient public notice and comment, and it did not adhere to the impartiality and conflict of interest requirments of the U.S. Code. Thus, the resultant expert panel reports were highly biased and did not include any consideration whatsoever of a large body of scientific studies which supported an opposite conclusion.

It would be one thing if the expert panels had first discussed and reviewed these studies and gave some rationale why the omitted studies were invalid. What happened is entirely different. All of the studies which supported the opposite conclusion were simply ignored and never even mentioned. Unless the public and scientific community were very alert, they would never catch the errors, omissions, and misrepresentation until it was too late.

ATSDR and EPA violate impartiality and conflict of interest requirements

EPA and ATSDR did not allow for public input or comment on selection of their expert panels, failing to act with impartiality and avoid conflicts of interest

Both EPA and the ATSDR chose expert panelists essentially behind closed doors without any opportunity for public input into their selection.

Neither the EPA nor the ATSDR published full information on the panelists, and apparently did not aggressively ask the necessary questions of the panelists to determine whether there were conflicts of interest and bias. Looking at a scientist ciriculum vitae is in no way adequate to determine whether a scientists serves solely and frequently as an expert witness for the asbestos industry, or whether a scientists university department is funded by the asbestos industry, etc. Neither the EPA nor the ATSDR included experts who had conducted research and had developed independent evidence published in prestigious peer reviewed journals which supported alternative conclusions than those of the panelists who were chosen.

The following are *Federal Register* notices from both EPA and the ATSDR, which claim, but without any supporting documentation, that the experts they have chosen are representative of the scientific community on the asbestos fiber size and chrysotile questions. There are no justifications for ATSDR's claim that the scientists they chose in fact represented a "cross section."

ATSDR: 10/11/02

ATSDR is holding a panel discussion to review and discuss the current state-of-the-art understanding of health effects related to asbestos and synthetic vitreous fibers (SVFs),

especially those of less than 5 microns in length. ATSDR has invited a cross section of scientists with expertise in the fields of toxicology, epidemiology, pulmonology/pathology, and medicine to participate in 11.2 days of discussions on a variety of topics, including depositional patterns of fibers in the lung and mechanisms of toxic action, the relationship of fiber size to toxicity,

. . .

ATSDR will use the scientific input received from the discussions of each of the individuals to aid in developing scientifically defensible public health evaluations for human exposures to smaller-than-5-micron fibers

. . .

[emphasis added] [ATSDR, 10/11/02, Panel Discussion Health Effects of Asbestos and Synthetic Vitreous Fibers: The Influence of Fiber Length, 67 FR 198: 63431-2, http://www.gpoaccess.gov/fr/index.html]

EPA: 2/5/03

The purpose of the workshop is to discuss the scientific merit of the proposed methodology developed for EPA by Dr. Wayne Berman and Dr. Kenny Crump. The proposed methodology distinguishes carcinogenic potency by asbestos fiber size and asbestos fiber type and advocates use of a new exposure index to characterize carcinogenic risk.

. . .

Expert panelists will discuss many relevant technical issues at the workshop . . .

. . .

The experts will include scientists with extensive expertise in relevant fields, such as biostatistics, fiber identification, inhalation toxicology, and carcinogenic mechanisms. The panelists will be asked to respond to several charge questions that address key issues in the proposed methodology, including interpretations of epidemiology and toxicology literature, the proposed exposure index, and general topics. The product of the peer consultation workshop will be a report that summarizes the panelists' and observers' comments, conclusions, and recommendations on the proposed methodology.

. . .

[ENVIRONMENTAL PROTECTION AGENCY [FRL 7445 7] Peer Consult ation Workshop on a Proposed Asbestos Cancer Risk Assessment: Notice of public meetings, 2/5/03, Federal Register, 68(24):5873, http://www.gpoaccess.gov/fr/index.html]

Comparison of TERA selection process for experts for EPA WTC constituent panel

The way ATSDR and EPA chose their panel members (essentially behind closed doors) is in marked contrast to the selection of the expert panel for the review of the EPA-lead initiative to evaluate a list of potential hazardous constituents of concern and health benchmarks for the WTC residential cleanup program. EPA retained the services of a non-profit organization, Toxicology Excellence for Risk Assessment (TERA) (www.tera.org) to select members for this expert panel.

For the TERA expert peer review panel selection, the full resumes of all panel members were distributed during the selection process and posted on the TERA web site, and the public was able

to review and research the appropriateness of service of each potential member. Criteria for participation on the peer panel were written and posted on the TERA website at the beginning of the process, which included conflict of interest exclusions. Panelists were asked specific questions through a questionnaire about associations with interests in the World Trade Towers, the cleanup, or other associated industries. TERA did not depend on a panelist voluntarily including such information in their resume.

Stakeholders in the WTC cleanup (citizens of NYC) were alerted to the expert panel review process, and were formally invited to submit names of other potential candidates for participation on the panel. Citizens did suggest names, and additional panel members were included. Details of the full panel selection process conducted by TERA may be found at *http://www.tera.org/peer/wtc/*

As discussed at the end of this section, one particular scientist serving on both the ATSDR and EPA expert panels apparently does have a conflict of interest. He actively testifies as an expert for defending asbestos-related industries, espousing the research claims of another scientist at the same institution, whose research was clearly funded by the asbestos industry.

Impartiality and conflict of interest requirements for official business

The following are the applicable statutes and regulations requiring the government and its employees not to give preferential treatment to industries affected by the action of the government. Federal employees receive training in these laws and regulations on an annual basis. Evidently neither EPA nor the ATSDR adhered to these impartiality requirements, and thus did not avoid conflicts of interest in their selection of their expert panels.

> Section 101. Principles of Ethical Conduct. To ensure that every citizen can have complete confidence in the integrity of the Federal Government, each Federal employee shall respect and adhere to the fundamental principles of ethical service as implemented in regulations promulgated under sections 201 and 301 of this order:
>
> (a) Public service is a public trust, requiring employees to place loyalty to the Constitution, the laws, and ethical principles above private gain.
> . . .
> (h) Employees shall act impartially and not give preferential treatment to any private organization or individual.
> . . .
> *[Executive Order 12731 of October 17, 1990, PRINCIPLES OF ETHICAL CONDUCT FOR GOVERNMENT OFFICERS AND EMPLOYEES, http://www.usoge.gov/pages/laws_regs_fedreg_stats/lrfs_files/exeorders/eo12731.html]*
>
> _____
>
> TITLE 18--CRIMES AND CRIMINAL PROCEDURE
> PART I--CRIMES, CHAPTER 11--BRIBERY, GRAFT, AND CONFLICTS OF INTEREST

> Sec. 208. Acts affecting a personal financial interest
> . . .
> (b) hereof, whoever, being an officer or employee of the executive branch of the United States Government, or of any independent agency of the United States, a Federal Reserve bank director, officer, or employee, or an officer or employee of the District of Columbia, including a special Government employee, participates personally and substantially as a Government officer or employee, through decision, approval, disapproval, recommendation, the rendering of advice, investigation, or otherwise, in a judicial or other proceeding, application, request for a ruling or other determination, contract, claim, controversy, charge, accusation, arrest, or other particular matter in which, to his knowledge, he, his spouse, minor child, general partner, organization in which he is serving as officer, director, trustee, general partner or employee, or any person or organization with whom he is negotiating or has any arrangement concerning prospective employment, has a financial interest Shall be subject to the penalties set forth in section 216 of this title. . . .

ATSDR and EPA violations of Federal Advisory Committee Act

Both the ATSDR and EPA clearly violated the requirements of the Federal Advisory Committee Act (FACA) as well as the underlying concepts of the Administrative Procedures Act (APA) from which the FACA arose.

ATSDR gave inadequate notice to the public of expert panel meeting and failed to notify of opportunity for public comment

The ATSDR only gave the public two weeks notice of its expert panel meeting by way of a 10/11/02 notice in the *Federal Register*. People who receive their FR notices by mail will often have a two week delay between the publication date and the day it is delivered. This is grossly inadequate notice.

Below is the ATSDR notice published in the *Federal Register*. Not only was inadequate time given to reach all those who would have had an interest in attending, ATSDR severely limited the ability of any observers to comment. Only those who were able to physically attend, and who managed to obtain registration, and who managed to garner their allotted 5 minutes to speak at the meeting were allowed any input, according to the ATSDR announcement:

When it published the report of the meeting, the ATSDR did include some written comments submitted by observers as an appendix. However, the ATSDR never gave notice to the public that written submissions would be accepted. Thus, the inclusion of the limited number of written comments, and only from observers who were able to attend the meeting at such late notice, is not representative of all those who would have wished to participate.

> Attending the Panel Discussion: The public is welcome to attend the panel discussions. There is no charge for attending the meeting; however, you must pre-register as seating is limited.
> . . .
> A limited amount of time will be set aside for members of the public to present brief oral comments regarding asbestos- and synthetic vitreous fiber related scientific issues. Oral presentations will be limited to 5 minutes, and the number of people giving oral comments may be limited by the time available. Opportunity for making oral comment will be provided on a first-come, first-served basis;
> . . .
> ATSDR will prepare a summary report that will capture the salient points of each of the panel members and observers.
> . . .
> *[ATSDR, 10/11/02, Panel Discussion Health Ef fects of Asbestos and Synthetic Vitreous Fibers: The Influence of Fiber Length, 67 FR 198: 63431-2, http://www.gpoaccess.gov/fr/index.html]*

EPA inadequate notice of meeting and failure to notify public of opportunity for comment

EPA held a similar meeting of essentially the same expert panel to draft its own asbestos risk reassessment. EPA also allowed less than 2 weeks from the date of publication in the *Federal Register* until the meeting, which, like the ATSDR, was inadequate notice. EPA only allowed for verbal input from observers who able to attend, and did not tell the public that they could submit any written comments.

> The workshop will be held on February 25 27, 2003. . . . . Observer comment periods are currently scheduled on Tuesday and Wednesday. ADDRESSES: The peer consultation workshop will be held . . . Francisco, California. . . . There is no charge for attending this workshop as an observer, but observers are encouraged to register early as the number of seats will be limited. . . . Copies of the proposed asbestos cancer risk assessment methodology can be obtained prior to the meeting from the EPA, OERR web page (www.epa.gov.superfund).
>
> Expert panelists will discuss many relevant technical issues at the workshop, and observers also will be invited to comment. . . . this report will be publicly available and become part of EPA's administrative record for IRIS. This meeting is being sponsored by EPA's Office of Solid Waste and Emergency Response and by EPA's Office of Research and Development.
> . . .
> *[ENVIRONMENTAL PROTECTION AGENCY [FRL 7445 7] Peer Consult ation Workshop on a Proposed Asbestos Cancer Risk Assessment: Notice of public meetings, 2/5/03, Federal Register, 68(24):5873, http://www.gpoaccess.gov/fr/index.html]*

Abstracts of FACA and APA statutes

Both EPA's and the ATSDR's procedures in conducting this expert peer panel on fiber size is in clear violation of the Federal Advisory Committee Act (FACA), which requires adequate public notice of the meeting itself, and notice to the public that all comments by interested parties will be accepted, included, and considered. The following are excerpts from these acts.

> Federal Advisory Committee Act
> UNITED STATES CODE, TITLE 5. GOVERNMENT ORGANIZATION AND EMPLOYEES
> APPENDIX 2. FEDERAL ADVISORY COMMITTEE ACT
>
> § 2. Findings and purpose
> (a) The Congress finds that there are numerous committees, boards, commissions, councils, and similar groups which have been established to advise officers and agencies in the executive branch of the Federal Government . . .
> . . .
> § 10. Advisory committee procedures; meetings; notice, publication in Federal Register; regulations; minutes; certification; annual report; Federal officer or employee, attendance
> (a) (1) Each advisory committee meeting shall be open to the public.
>
> (2) Except when the President determines otherwise for reasons of national security, timely notice of each such meeting shall be published in the Federal Register, and the Administrator shall prescribe regulations to provide for other types of public notice to insure that all interested persons are notified of such meeting prior thereto.
>
> (3) Interested persons shall be permitted to attend, appear before, or file statements with any advisory committee, subject to such reasonable rules or regulations as the Administrator may prescribe.
> . . .
> (c) Detailed minutes of each meeting of each advisory committee shall be kept and shall contain a record of the persons present, a complete and accurate description of matters discussed and conclusions reached, and copies of all reports received, issued, or approved by the advisory committee. The accuracy of all minutes shall be certified to by the chairman of the advisory committee.
> . . .
> *[Federal Advisory Committee Act, 5 U.S.C., App. 2, http://www.archives.gov/federal_register/public_laws/acts.html]*

> Administrative Procedures Act Sec. 557. - Initial decisions; conclusiveness; review by agency; submissions by parties; contents of decisions; record
> (c) Before a recommended, initial, or tentative decision, or a decision on agency review of the decision of subordinate employees, the parties are entitled to a reasonable opportunity to submit for the consideration of the employees participating in the decisions
> (1) proposed findings and conclusions; or
> (2) exceptions to the decisions or recommended decisions of subordinate employees or to tentative agency decisions; and
> (3) supporting reasons for the exceptions or proposed findings or conclusions.

> The record shall show the ruling on each finding, conclusion, or exception presented. All decisions, including initial, recommended, and tentative decisions, are a part of the record and shall include a statement of -
>
> (A) findings and conclusions, and the reasons or basis therefor, on all the material issues of fact, law, or discretion presented on the record; and
>
> (B) the appropriate rule, order, sanction, relief, or denial thereof.
>
> . . .
>
> *[Administrative Procedures Act, 5 U.S.C, Subchapter II, http://www.archives.gov/federal_register/public_laws/acts.html]*

EPA and ATSDR expert panel reports based on biased, selective group of studies

As a result of not giving the public adequate notice or opportunity to comment, and having expert panelists who were biased, both the EPA and ATSDR reports ignored important peer reviewed studies which supported an opposite conclusion.

It would be one thing if the expert panels had first discussed and reviewed these omitted studies, and given some rationale why the conclusions of the omitted studies were invalid. Instead, all of the studies which supported the opposite conclusion were simply ignored and never even mentioned. Unless the public and scientific community were alert, it would never catch the errors and misrepresentation until it was too late.

Conclusions in the ATSDR expert panel report

The ATSDR expert panel report stated the following:

> Seven expert panelists reviewed and discussed the state of the science on how fiber length relates to toxicity of asbestos and synthetic vitreous fibers (SVFs) an issue relevant to the Agency for Toxic Substances and Disease Registry's (ATSDR's) ongoing work at several sites where fiber contamination is found in or near residential neighborhoods. The expert panelists included epidemiologists, pathologists, physicians, hygienists, pulmonologists, and toxicologists. During a 2-day meeting in October 2002 in New York City, the panelists thoroughly discussed the physiological fate of structures less than 5 micrometers (µm) in length having aspect ratios greater than 3:1, health effects of asbestos and SVFs of the same dimensions, and research needs....
>
> . . .
>
> Cancer effects of short fibers. Given findings from epidemiologic studies, laboratory animal studies, and in vitro genotoxicity studies, combined with the lung's ability to clear short fibers, the panelists agreed that there is a strong weight of evidence that asbestos and SVFs shorter than 5 µm are unlikely to cause cancer in humans.
>
> . . .
>
> *[Report on the Expert Panel on Health Effects of Asbestos and Synthetic Vitreous Fibers: The Influence of Fiber Length, Prepared for: Agency for Toxic Substances and Disease Registry Division of Health Assessment and Consultation*

> *Atlanta, GA, Prepared by: Eastern Research Group, Inc.110 Hartwell Avenue, Lexington , MA 02421 March 17, 2003, http://www.atsdr.cdc.gov/HAC/asbestospanel/]*

Typical government toxicological assessments do not ignore relevant research

The preface of all ATSDR toxicological profiles contain the following statement. This statement typifies the intended process of any governmental review and assessment of toxicological studies, namely to review and evaluate all the relevant peer reviewed scientific evidence.

> This profile reflects ATSDR's assessment of all relevant toxicological testing and information that has been peer-reviewed. Staff of the Centers for Disease Control and Prevention and other Federal scientists have also reviewed the profile. In addition, this profile has been peer-reviewed by a nongovernmental panel and was made available for public review. Final responsibility for the contents and views expressed in this toxicological profile resides with the ATSDR.
> . . .
> Legislative Background
> The toxicological profiles are developed in response to the Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public law 99-499) which amended the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund). This public law directed ATSDR to prepared toxicological profiles for hazardous substances most commonly found at facilities on the CERCLA National Priorities List and that pose the most significant potential threat to human health, as determined by ATSDR and the EPA.
> . . .
> *[ATSDR (2001) TOXICOLOGICAL PROFILE FOR ASBESTOS, http://www.atsdr.cdc.gov/toxprofiles/tp61.html]*

Due notice given to EPA that key studies were omitted

Appendix 2 of this report lists those key studies which were omitted from both the ATSDR and EPA reports.

On 2/21/03, I forwarded this same list, also including extended abstracts of the omitted studies, to Richard Troast, the EPA person listed in EPA's *Federal Register* notice of 2/5/03. I was later contacted by another person in EPA working on the asbestos reassessment who wanted a full copy of the studies, which I submitted to her electronically. Thus, because of the date of my memorandum, several days before EPA's expert panel meeting, there is no reason that EPA should not formally consider each study. My cover memorandum to Troast stated the following:

> In response to the February 5, 3003 *Federal Register* notice, announcing a peer consultation workshop on EPA's draft asbestos cancer risk reassessment based on fiber size and fiber type, I am sending you a compilation of studies that are relevant to the issue. See attachment.

> The draft EPA asbestos re-assessment left out, missed, neglected, or omitted these important studies. Even if eventually found irrelevant or not compelling, they should be included and discussed fully during the risk reassessment process. Not including these studies serves only to bias the outcome of the risk reassessment. . . . *[Jenkins, 2/21/03]*

Role of omitted studies in EPA asbestos reassessment

Issues regarding fiber length and chrysotile carcinogenicity – central to EPA reassessment

Currently, EPA considers all mineralogical forms of asbestos to have the same carcinogenic potency. EPA does not differentiate and say that it is safer to have higher exposures to chrysotile than to the amphibole types of asbestos.

But this may change as a result of the WTC collapse. It is important for the asbestos industry to have EPA say that chrysotile asbestos is not as toxic as other types of asbestos. If the industry is lucky, it may even get EPA to say that chrysotile asbestos cannot cause cancer at all.

Industry is also eager for EPA to say that asbestos fibers shorter than 5 micrometers (5 µm, the same as 5 microns), no matter whether they are in the chrysotile or amphibole types, do not cause cancer. The theory is that fibers this small can be cleared from the lung and the rest of the body by macrophages. Thus, they do not remain in the body long enough to cause cancer. Chrysotile asbestos usually has much shorter fibers than amphibole asbestos. Furthermore, the asbestos from the WTC collapse (mostly chrysotile) is so finely pulverized, that a higher fraction than usual contains fibers shorter than 5 µm.

But there is another school of scientific opinion that believes that it is the ratio of the length to the width of the asbestos fibers that is more important in deciding whether they are carcinogenic. This is the aspect" ratio. In other words, even fibers shorter than 5 µm are carcinogenic if they are thin.

Even if the body can clear the extremely small fibers under normal conditions, under high exposures, there will be overload.[82] The clearance mechanisms are overwhelmed, and the lungs and tissues in the thorax (mesothelial tissues) retain the fibers. This was the case for WTC exposures in those first hours and days.

Furthermore, it is irrelevant whether or not the lung can clear fibers that are smaller than 5 µm. Asbestos causes cancer in other parts of the body, namely the mesothelial linings of tissues in the body cavities. The rate of mesothelioma is 10 times that of lung cancer from asbestos exposure. Research shows that the majority of the fibers that reach extrapulmonary sites (outside of the lung) are shorter than 5 µm.

a. **The lung tends to retain the longer fibers since they are more difficult to clear. Nevertheless, there is still a predominance of short fibers as the major component in the lung.**

b. **The short fibers more easily migrate out of the lung to the extrapulmonary sites where asbestos diseases occur.**

It is obvious that if a major concern is mesothelioma, then the longer fibers that are retained by the lung are not causing mesothelioma.

This chain of events, short fibers migrating out of the lung to cause mesothelioma, was established by a study in 1980, followed by many more studies based on autopsies of human mesothelioma cases:

> As has been extensively documented, the pleura is often the target organ for asbestos exposure. . . . A possible explanation could be that very active asbestos fibres are accumulated within the pleural tissues after their translocation from the lung. In order to verify this idea, asbestos fibres were assessed in pleural *[thorax, mesothelial]* and parenchymal *[lung]* tissues from several autopsy cases *[of mesothelioma]*.
> . . .
> There was no evident corr elation between numerical concentrations of fibres in lung parenchyma and those in perietal pleura.
>
> The study has shown that characteristics of asbestos retention in parietal pleura cannot be derived from measurements in lung parenchyma. On the basis of the cases analyzed here, who were exposed to mixed types of asbestos dust, chrysotile seems to be the asbestos type retained almost exclusively in parietal pleural tissues. These findings might be taken into account when assessing the risk of pleural diseases (especially mesothelioma) attributable to each type of asbestos fibre.
> . . .
> *[Sebastien P, Janson X, Gaudichet A, Hirsch A, Bignon J. (1980) Asbestos retention in human respiratory tissues: comparative measurements in lung parenchyma and in parietal pleura. IARC Sci Publ 1980;(30):237-46.]*

Review article of many of the key studies omitted by EPA and ATSDR

A review article of many of these same studies omitted by EPA and the ATSDR has recently been accepted for publication. Extended abstracts of that review are given below:

> The review considers experimental models that have been used to assess the response to various lengths of fibers in animal models in addition to data obtained from studies of human materials. The review also emphasizes the importance in defining the method by which a sample is categorized.
>
> Results: Data are offered which support the potential for longer fibers as well as shorter fibers to contribute to pathological responses.

Conclusions: The data presented argue that asbestos fibers of all lengths induce pathological responses and that caution should be exerted when an attempt is made to exclude any population of inhaled fibers, based on their length, from being contributors to the potential for development of asbestos-related diseases.

. . .

In contrast to Stanton's concept that longer fibers are more active carcinogens, Pott and colleagues [Pott et al., 1974] found that fibers shorter than 10µm in length could induce tumors. In one set of experiments they used milled chrysotile, which contained few fibers longer than 10µm in length and with 99.8% of the fibers shorter than 5µm in length. Thirty percent of the animals in this group developed tumors.

. . .

More to the point Davis [Davis et al., 1991] found that all tremolite samples, irrespective of morphological form or length (including those which were morphologically consistent with cleavage fragments), possessed some potential to produce mesothelioma after being injected into the peritoneal cavity. This included some samples with thicker fibers as well as a sample defined as having "relatively few asbestiform fibers" which "nevertheless produced tumors in 70% of rats". Thus while not a "regulated fiber" these structures may well pose significant health risks.

The works of Stanton and Pott suggested that longer fibers including non-asbestos fibers have more carcinogenic potential than short fibers. Fraire [Fraire et al., 1994] studied the effects on the pleural surface induced by intrapleural injections of fiberglass. The fiberglass preparation was carefully sized and consisted of fibers with a mean length of 2.2µm and a width of 0.15 µm. The changes he observed ranged from chronic inflammation, fibrosis, and foreign body reaction to mesothelial hyperplasia and dysplasia. The most dramatic pathological event was the occurrence of mesothelioma in three of the twenty-five animals.

Lippmann [Lippmann, 1990] used data from humans to further refine this concept of a correlation between fiber length and the potential for inducing disease. He concluded that asbestosis was most correlated to the number of fibers longer than 2µm and thicker than 0.15 µm; mesothelioma to the number of fibers longer than "about" 5µm and thinner than "about" 0.1 µm; and lung cancer to the number of fibers longer than "about" 10µm and thicker than "about" 0.15 µm.

By contrast Dr. Andrew Churg, who has contributed appreciably to the understanding of the connection between the tissue burden of asbestos and resulting diseases, concluded from a study involving individuals heavily exposed to amosite and chrysotile that "except for pleural plaques, the association of fiber size and disease remains uncertain" [Churg and Vedal, 1994]. Furthermore these authors concluded that in their study "mesotheliomas are not associated with long fibers and in fact are probably associated with lower-aspect-ratio fibers than found in subjects without asbestos-related disease". Mc Donald [McDonald et al., 2001] reviewed the asbestos tissue burden of a series of individuals with mesothelioma who were 50 years of age or younger at the time of diagnosis.

. . .

A study of lung tissue from 55 mesothelioma cases using analytical transmission electron microscopy in our laboratory revealed some of the pitfalls associated with extrapolating data from fiber burden. First, it is imperative that the study clearly define the counting procedure, the techniques used, the magnification of the count and finally a clear definition of what is included in the count (so that the reader is able to determine what is not included) [Dodson et al, 1997]. For example, in our transmission electron microscopy

study, 48% of the amosite fibers fit the Stanton hypothesis. However, if one used a light microscope, only 33 %would meet the criteria due to the different detection limit. This difference is even more dramatic for chrysotile. Thirty-nine percent of the chrysotile fibers met the Stanton definition (>8µm in length and <0.25 µm in diameter), but by light microscopy only 1.4% would have been detected due to the thin diameter of the fibers.
. . .

There are indeed many other contributing issues, which have now been identified as associated with fibrous particulates and their potential for inducing cell damage. Just a few of these include the generation of active oxygen species [Churg, 1996; Mossman and Churg, 1998; Jaurand, 1997; Mossman et al., 1986a; Mossman et al., 1986b] surface properties of the different types of asbestos, [Bonneau et al., 1986a; Bonneau et al., 1986b] and charge characteristics [Hamilton, 1983; Valerio et al., 1987]. Xu [Xu et al., 2002] studied the mutagenicity of short crocidolite (average length of 3.2 µm) asbestos evaluated via response of mammalian cells. They concluded that the mutagenicity of these short fibers was mediated by reactive oxygen species. These are surface specific and the only relationship to variations in fiber dimensions occur in the changes of available areas for reactive surfaces. However, the mass of shorter fibers which result in their greater abundance in any inhalation situation would suggest that in total these together could pose a greater overall opportunity for surface reactivity in the lung or other tissues than on the smaller numbers of fibers which make up the longer population.
. . .
Sebastien [Sebastien et al., 1980] reviewed samples of lung and parietal pleura from 29 cases *[of lung cancer]* **. . .** They noted when the pleural samples were positive for asbestos the type was “almost all” chrysotile. The mean length of fibers in the lung was 4.9µm and of those in the pleura was 2.3 µm. They also concluded that “lung parenchymal retention is not a good indicator of pleural concentrations”,
. . .
A study comparing fiber burden in lung, thoracic lymph nodes, and pleural plaques from occupationally exposed individuals was carried out in our lab [Dodson et al., 1990]. The average length of asbestos fibers, both chrysotile and amphibole fibers, found in the lung was longer than lengths for the same fibers obtained from the lymph nodes or plaques. However, the majority of asbestos fibers in all three sites were short fibers (<5µm) with only 4% of the chrysotile in the lung >10µm and none were detected within the parameters of the analysis which were >10µm in the pleural plaques or lymph nodes.
. . .
Suzuki and Yuen [Suzuki and Yuen, 2001][Suzuki and Yuen, 2002] compared the asbestos burden in lung and mesothelial tissues from individuals with mesothelioma from the aspects of fiber burden, fiber types, and fiber dimensions. They found that the majority of fibers in both the lung and mesothelial tissues were less than 5µm in length. They also reported that only 4% of the fibers fit Stanton’s hypothetical dimensions of >8µm in length and thinner than 0.25µm in diameter. The majority of the fibers they found were shorter and thinner than these parameters.
. . .
We believe that it is difficult to exclude fibers of a particular dimension from a role in causing disease within the lung or extrapulmonary sites when one accepts that both the exposure and tissue burden have fibers of varying lengths and widths. **. . .** A telling point remains that when the appropriate analytical techniques are utilized it becomes apparent that in most tissues the overwhelming majority of the asbestos fibers are less than 5µm in length.
. . .

> *[emphasis added] [Accepted for publication in the American Journal of Industrial Medicine, 4/28/03, Asbestos Fiber Length as Related to Potential Pathogenicity: A Critical Review, Ronald F. Dodson, Ph.D., FCCP, FAHA; Mark A.L. Atkinson, M.A., D.Phil.; and Jeffrey L. Levin, M.D., M.S.P.H., The University of Texas Health Center at Tyler, Tyler, TX]*

Potential conflicts, bias in scientist on both ATSDR and EPA expert panels

Dr. Bruce Case at McGill University in Canada has made the following categorical statement that there was a consensus in the scientific community that chrysotile asbestos did not cause cancer. He made these statements in the *New England Journal of Medicine* and as an expert witness for asbestos-related companies. Case made these assertions based on studies funded by the Quebec Asbestos Mining Association (QAMA). Case utilized the research of another member of the faculty at McGill University, McDonald, to support the contention that chrysotile asbestos, the type of asbestos found in WTC dust, is not carcinogenic, who was funded by QAMA.

Statements and expert testimony by Case that chrysotile asbestos is not carcinogenic

In an affidavit prepared for an asbestos-related industry, Case stated the following:

> The first formal epidemiological investigation of the question of tremolite genesis of mesothelioma in chrysotile workers was published in SCIENCE in 1995; a preliminary study . . . As seen below, the definitive proof was to follow two years later.
> . . .
> The 1997 report on mesothelioma (McDonald AD, Case BW, Churg A et al. 1997) established that chrysotile *was not the cause* of the mesothelioma reported, just as vermiculite *was not the cause* of that disease in the Libby Montana vermiculite miners . . . Rather what, in the earlier literature, had been reasonably assumed to be "chrysotile-related" mesothelioma (and was cited as such by Dr. Lemen as late as 1996) from Quebec was in these reports (especially McDonald AD, Case BW, Churg A et al. 1997) shown to occur as a result of exposure either to tremolite in mining and milling areas . . .
> . . .
> *[emphasis added] [Affidavit of Bruce W. Case. MD, 6/20/01, http://www.brown.edu/Courses/Bio_Community_Health168C/canada/case_Affadavit.pdf]*

In another instance, Case said the same thing in a letter in the *New England Journal of Medicine*. The Editor of that prestigious journal added the comment at the end that Case had served as an expert witness for the asbestos industry during the five preceding years. Case's letter elicited several responses, one of them from Dr. Phil Landrigan, which is also abstracted below:

> Bruce W. Case, M.D.McGill UniversityMontreal, QC H3A 2B4, Canada
> To the Editor: Landrigan is wrong in concluding that ``a more than sevenfold mortality rate... from pleural cancer in mining areas, as compared with non mining areas,

corroborates an enormous body of literature showing that Canadian chrysotile... is a potent carcinogen.'' This mortality rate (seven cases) is entirely explained by the few cases among women in the area who had occupational exposure to amphiboles in the manufacture of gas masks, (Ref. 1) the repair of burlap bags that contained imported fibers, (Ref. 2) and possibly, in one case, the tremolite brought home on miners' clothes. (Ref. 2) Seven such women received workers' compensation in Quebec during the period of the study by Camus et al. Indeed, there is now a scientific consensus that chrysotile asbestos is not a cause of malignant mesothelioma, even among chrysotile-asbestos miners and millers. *[emphasis added]*

. . .

Editor's note: Dr. Case has served as an expert witness in asbestos litigation during the past five years.

. . .

Letter 009, Philip J. Landrigan, M.D. Mount Sinai School of Medicine, New York, NY 10029

. . .

Case is inaccurate in his claim that chrysotile asbestos from Canada is not a cause of mesothelioma, and his assertion that there is a scientific consensus on this point is not true. (Ref. 5) Also, he is disingenuous in his one-sided quest for factors other than chrysotile that would explain away the observed sevenfold excess of mesotheliomas among women in the chrysotile-asbestos-mining areas of Quebec. Experimental as well as epidemiologic studies have shown conclusively that Canadian chrysotile is fully capable of causing malignant mesothelioma, (Ref. 5) and the International Agency for Research on Cancer acknowledges that chrysotile is a cause of mesothelioma. (Ref. 3)

. . .

[Letters 006 and 009*, The New England Journal of Medicine , Oct 1 , 1998 , Volume: 339 , Number: 14, Page: 999-1002, Nonoccupational Exposure to Chrysotile Asbestos and the Risk of Lung Cancer (Correspondence) Churg, Andrew; Demiroglu, Haluk; Sokas, Rosemary K.; Costas, Eduardo; Garrido, Amando; Goyanes, Vicente J.; Langer, Arthur M.; Case, Bruce W.; Morgan, Robert W.; Goodman, Michael; Camus, Michel; Siemiatycki, Jack; Landrigan, Philip J.]*

In deposition testimony as an expert witness on behalf of UNITED STATES GYPSUM COMPANY, defendants, Case testified as follows:

Q. Is it your opinion, Doctor Case, that chrysotile never causes mesothelioma in human beings?

A. It's my opinion that, given the current state of medical knowledge, chrysotile is not a cause of malignant mesothelioma.

Q. So you agree that, it is your opinion that chrysotile has never caused mesothelioma in human beings?

Mr. ERIC K. FALK: Objection, asked and answered. Go ahead.

THE WITNESS: A. My opinion is that given the current state of medical knowledge, chrysotile is not a cause of malignant mesothelioma.

. . .

Q. So, how long does an asbestos fiber have to be present in somebody's body to initiate

the change in a cell that eventually leads to cancer of the pleura?

A. Well, first of all, it has to be an amphibole fiber not a chrysotile fiber, but having said that, the answer is nobody knows because we don't know the mechanisms of production of disease . . .
. . .
[emphasis added] [Bruce W. Case, 8/22/01, IN THE DISTRICT COURT IN AND FOR THE COUNTY OF BOULDER, STATE OF COLORADO, CASE NO: 2000, CV 2035, DAVID ALBER and JOYCE ALBER, as Husband and Wife, Plaintiffs, vs. UNITED STATES GYPSUM COMPANY, et al., Defendants, http://www.brown.edu/Courses/Bio_Community_Health168C/canada/case200b.txt]

McDonald studies and other research at McGill University funded by the asbestos industry

The asbestos industry funded a series of research efforts at McGill University, including the series of studies by McDonald on a particular worker group at a mine in Quebec. The following are minutes from asbestos trade industry associations talking first about setting up and funding its own research programs at McGill, and then about approving and funding the research of McDonald on the mine workers.

Minutes of the Asbestos Textile Institute, General Meeting, 6/4/65, Hotel Le Provence, Thetford Mines, Canada

President Brown then introduced Mr. Karl V. Lindell, Chairman, Canadian Johns-Manville Co., Ltd., who expressed his pleasure at having the opportunity to attend this meeting, and said that he would like to have Mr. Ivan Savourin, M. C., attorney for the Q.A.M.A. *[Quebec Asbestos Mining Association]* tell us about the . . . Q.A.M.A. program for Research in Mining Pathology for *[illegible]* of Respiratory Diseases as related to Chrysotile asbestos.
. . .
Explained that the Q.A.M.A. program is still in the formative stage. They seek alliance with some university, such as McGill, for example, as that authoritative background for publicity can be had. The program will start modestly, with competent men coming into it men with a vast background of actual experience. They recognize the need to consolidate experiences, and also having traveled widely in other countries, they find that research units are usually located adjacent to a large, well equipped hospital. Frequently, the worker has a condition that is not attributable to association with asbestos, discovered through cooperation with the hospital staff. . . . *[emphasis added]*

Minutes of the 95th meeting of the Quebec Asbestos Mining Association, 11/29/65

A first and unanimous recommendation was the carrying out of the epdemiological survey proposed by Dr. McDonald. The consensus of opinion serves to point out that the QAMA should take into its hands the ways and means to conduct the necessary research instead of doing it through universities or letting it fall in the hands of the Government. As an example, it was recalled that the tobacco industry launched its own program and it now

> knows where it stands. Industry is always well advised to look after its own problems. . . . *[emphasis added]*
>
> _____
>
> Quebec Asbestos Mining Association, Special summer meeting Manor Ric helieu, Murray Bay, P.G., August 8 - 11, 1967, Public Relations Committee Report
>
> Asbestos Health We c ontinue to receive an extremely bad press concerning the question of asbestos and health. Not only has Dr. Selikoff's latest paper been given wide publicity across Canada concerning the alleged relationship between smoking, asbestos and lung cancer, but the financial post recently had an article on asbestos insulation in British railway coaches which seems almost actionable.
>
> The Public Relations Committee is strongly of the opinion that the time has come for us to produce some rebuttal ourselves, either in a general way or medically substantiated to the extent possible at this time, and we are anxious to meet with the Scientific Committee of the Occupational & Environmental Health Committee with a view to discussing the possibilities of providing some counter propaganda, as agreed at the Jasper meeting last Summer. . . . *[emphasis added]*

The following are excerpts from a book by Paul Brodeur where the same researcher, McDonald, first denies any association with the asbestos industry. McDonald then admits it when confronted with a copy of his own research paper that states the project was funded by the Quebec Asbestos Mining Association:

> According to Dr. Wright, a recent study conducted by Dr. John Corbett McDonald, of the Department of Epidemiology and Health at McGill University, in Montreal, furnished . . . proof that mesothelioma was virtually absent in people who were exposed only to chrysotile asbestos a type of t he mineral that accounts for ninety-five per cent of the world's production, and the type that Johns-Manville mines, uses, and sells almost exclusively. "Mesothelioma appears to be predominantly linked with exposure to crocidolite or amosite." Dr. Wright declared. "Therefore, both of these types of asbestos should be controlled more stringently than is chrysotile."
>
> . . .
>
> [T]he seat at the witness table was taken by Dr. McDonald, who stated at the outset that he was a professor of epidemiology and the chairman of the Department of Epidemiology and Health of McGill University, and that he had specialized in epidemiology for twenty-four years. "I would now like to add one or two pints not in my written submission, in order to clarify my position here," Dr. McDonald continued. "The first point is that I am a full-time employee at McGill University, and an independent research worker. I do not work, nor am I associated, with any asbestos producer or manufacturer. The research I shall be describing is supported by grants, not to me but to McGill University, from a number of sources the Institute of Occupational and Environmental Health, the Canadian government, the British Medical Research Council, and the United States Public Health Service. I am not here to support the testimony or position of Johns-Manville or any other body affect by the proposed regulations."
>
> . . .
>
> After receiving permission from Goldberg to address Dr. McDonald, I reminded him that in his opening remarks he had declared that all his research had been performed

> independently. "That is correct," Dr. McDonald replied. "All things are relative."
>
> I then reminded Dr. McDonald that John Jobe had testified at the morning session that his company was supporting research on asbestos disease, and asked him if that was research other than what he had performed. "I guess what Mr. Jobe is referring to is the fact that Johns-Manville, together with other mining companies, helps support the Institute of Occupational and Environmental Health, which is a granting body that receives research applications, and which therefore indirectly supports our research," Dr. McDonald replied. "Now, it is a very indirect relationship."
>
> I then pointed out to Dr. McDonald that at the end of his article in the Archives of Environmental Health, a credit was listed in small type: "This work was undertaken with the assistance of a grant from the Institute of Occupational and Environmental Health of the Quebec Asbestos Mining Association." "That is correct," Dr. McDonald said.
>
> With that, I took my seat. Dr. McDonald had just indirectly admitted that Johns-Manville, together with other asbestos-mining companies, supported the Institute of Occupational and Environmental Health, and that institute, in turn, had helped support his study. Moreover, the credits at the end of his article, which listed no financial support other than that supplied by the institute, and given the full and correct title of this organization the Institute of Occupational and Environmental Health of the Quebec Asbestos Mining Association.
>
> . . .
>
> *[Expendable America, by Paul Brodeur, 1973, pp. 126 - 134]*

The following are excerpts from study by another McGill scientist that claims chrysotile asbestos was not the cause of the lung changes (pleural thickening) in asbestos workers, but instead some other mineral associated with chrysotile. This research also was funded by the asbestos industry.

> Etiology of Pleural Calcification: A Study of Quebec Chrysotile Asbestos Miners and Millers
>
> . . .
>
> This distribution of pleural calcification in this Quebec industry suggests that it is related to some characteristic of airborne dust or mineral closely associated with the chrysotile that is encountered during mining in Thetford Mines but not in other mining areas. Possible minerals include mica, talc, and breunnerite. . . . The extremely local geographical and occupational clumping of men with pleural calcification suggested that exposure to some agent (probably dust) associated with certain mines and jobs was responsible. The identification of this agent depends on demonstration that exposure to a particular mineral in Thetford Mines did not occur to a large degree elsewhere . . . It appears highly unlikely that chrysotile asbestos itself is responsible for the pleural calcification, but rather a mineral closely associated with it.
>
> . . .
>
> I wish to thank . . . the management and employees of the Quebec Asbestos Mining Industry for their invaluable cooperation. The research was supported by a grant from the Institute of Occupational and Environmental Health of the Quebec Asbestos Mining Association. . . . Reprints of this article may be obtained from: Dr. Graham W. Gibbs, Department of Epidemiology and Health, McGill University . . . *[emphasis added]*
>
> . . .
>
> *[Gibbs, GW (1979) Archives of Environmental Health, March/April, p. 76]*

V: NATIONAL CONTINGENCY PLAN (NCP) DENIED AND VIOLATED

"EPA appears to have correctly followed the Federal Response Plan (FRP) which provides for Federal agencies to supplement a local authority's response and not take over control. However, questions remain about EPA's obligation to press for greater control over indoor air issues if it is determined that NYC was not doing an adequate job in addressing indoor air issues. Also, FEMA's decision to implement FRP (ESF#10) did not preclude or prevent EPA from implementing the NCP. EPA considered implementing the NCP but choose not to . . ." ***[1/27/03 EPA IG report]***

The EPA IG report of 1/27/03 is incorrect in making the following claim about EPA implementing the Federal Response Plan (FRP):

> EPA appears to have correctly followed the Federal Response Plan (FRP) which provides for Federal agencies to supplement a local authority's response and not take over control. However, questions remain about EPA's obligation to press for greater control over indoor air issues if it is determined that NYC was not doing an adequate job in addressing indoor air issues. Also, FEMA's decision to implement FRP (ESF#10) did not preclude or prevent EPA from implementing the NCP. EPA considered implementing the NCP but choose not to. . . .

By making this statement, the EPA IG is actually claiming the following, which is totally false:

> EPA can follow the FRP without following the NCP. The FRP and the NCP are two separate statutory authorities, one administered by FEMA, and the other by EPA. EPA has the option of invoking the NCP, whether or not the FRP has already been invoked. ESF #10 (Emergency Response Function #10) has nothing to do with the NCP and does not mention the NCP.

In fact, the FRP requires that EPA invoke and follow the NCP whenever it is pulled under the FRP umbrella. The FRP specifically states that EPA's role is to sit as the chair for all the different governmental entities when there have been releases of hazardous materials, and utilize the NCP as its statutory authority, legal framework, and guiding regulations in all actions for hazardous material removal and remediation. The FRP very specifically states that in invoking ESF #10, EPA must invoke the NCP.

It is disconcerting that the EPA IG report of 1/27/03 missed this point. It may be that the EPA IG is being disingenuous in its claims, or attempting to obfuscate the fact that EPA actually did invoke the NCP.

Even if the FRP had been vague about the specific statutory authority under which EPA would operate, the EPA regulations and the guidance EPA developed for how it would respond to either terrorist bombings or chemical/biological agents are not vague. The NCP regulations and EPA terrorism planning clearly state that the NCP will be invoked, as well as EPA's response to natural disasters.

If that is not enough, Administrator Whitman testified that EPA's response to the WTC disaster was pursuant to the NCP.

Furthermore, Region 2 had assigned "On Scene Coordinators" (OSCs) as late as October, 2002 for WTC duties. OSCs are job functions under no other EPA statutory authority other than CERCLA and the NCP.

What is the FRP and the NCP?

The Federal Response Plan (FRP) means the agreement signed by 27 federal departments and agencies, including the Red Cross, under the Stafford Disaster Relief Act of 1988. The FRP is administered by the Federal Emergency Management Administration (FEMA) which is now part of the Homeland Security Administration.

The following is from the FEMA website:

> President Carter's 1979 executive order merged many of the separate disaster-related responsibilities into a new Federal Emergency Management Agency (FEMA). Among other agencies, FEMA absorbed: the Federal Insurance Administration, the National Fire Prevention and Control Administration, the National Weather Service Community Preparedness Program, the Federal Preparedness Agency of the General Services Administration and the Federal Disaster Assistance Administration activities from HUD. Civil defense responsibilities were also transferred to the new agency from the Defense Department's Defense Civil Preparedness Agency.
> . . .
> In March 2003, FEMA joined 22 other federal agencies, programs and offices in becoming the Department of Homeland Security. . . . Today, FEMA is one of four major branches of DHS.
> . . .
> *[http://www.fema.gov/about/history.shtm]*

EPA describes the National Contingency Plan (NCP) as follows:

> The National Oil and Hazardous Substances Pollution Contingency Plan, more commonly called the National Contingency Plan or NCP, is the federal government's blueprint for responding to both oil spills and hazardous substance releases. The National Contingency Plan is the result of our country's efforts to develop a national response capability and promote overall coordination among the hierarchy of responders and contingency plans. .

. . *[www.epa.gov/oilspill/ncpover.htm]*

The NCP has been incorporated into the newer broader CERCLA statute, which includes Superfund as well. CERCLA is the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. Cleanups (called either "removals" or "remediations") under the CERCLA use the same objective criteria and methods for either Superfund or non-Superfund (NCP) "spills" or "releases" of hazardous substances.

FRP and EPA regulations require EPA to invoke NCP for terrorism and disasters

FRP requirements for EPA to invoke the NCP whenever ESF # 10 invoked

A defining sentence from the FRP is given below, and more extensive excerpts later:

> **If the FRP is invoked and there are hazardous materials releases necessitating the activation of this ESF *[Emergency Support Function #10]*, the NRT/RRTs would carry out their duties and responsibilities as put forth in the NCP and agency implementing procedures.**

The EPA IG report set forth the theory that if FEMA ESF #10 is implemented, then there is no need for any action under the NCP. The contrary is true. By activating ESF #10, the NCP is explicitly invoked.

After the WTC disaster, EPA became part of the FRP operations umbrella. ESF #10 was invoked, otherwise EPA could not have participated. The following are relevant portions of the FRP from the FEMA website at *http://www.fema.gov/rrr/frp/* describing EPA's function. Emphasis has been added.

> The FRP also may be implemented in response to the consequences of terrorism, in accordance with Presidential Decision Directive (PDD)-39 and PDD-62 that set forth U.S. counterterrorism policies. The FRP Terrorism Incident Annex describes the concept of operations for a unified response to a terrorism incident involving two or more of the following plans: the FRP, the Federal Bureau of Investigation (FBI) Weapons of Mass Destruction (WMD) Incident Contingency Plan, the Department of Health and Human Services (HHS) Health and Medical Services Support Plan for the Federal Response to Acts of Chemical/Biological Terrorism, the NCP, and the FRERP.
> . . .
> Emergency Support Function #10 Hazardous Materials Annex
> Primary Agency: Environmental Protection Agency
>
> *I. Introduction*
>
> A. Purpose
> Emergency Support Function (ESF) #10 Hazardous Materi als provides Federal

support to State and local governments in response to an actual or potential discharge and/or release of hazardous materials following a major disaster or emergency.

. . .

A Presidential declaration does not automatically activate ESF #10. DHS will determine, in consultation with affected States, the Environmental Protection Agency (EPA), and the U.S. Coast Guard (USCG), if appropriate, if such activation is required to supplement the efforts of State and local governments. (The USCG will be consulted in a disaster or emergency where the predominant damage is within its jurisdiction. As primary agency for the ESF, EPA also will be consulted in such cases.) Within the context of this ESF, the term "hazardous materials" is defined broadly to include oil; hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended; pollutants and contaminants defined under Section 101(33) of CERCLA; and certain chemical, biological, and other weapons of mass destruction (WMD). Federal response to releases of "hazardous materials" is carried out under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 Code of Federal Regulations (CFR) 300).

. . .

3. EPA will serve as the National Chair and lead agency for each activation of ESF #10, with close coordination with the USCG in geographic locations under USCG jurisdiction. EPA will be the ESF #10 Regional Chair in preparedness and for ESF #10 activations in response to a disaster or emergency affecting areas under EPA jurisdiction. The USCG will be the ESF #10 Regional Incident Chair for a disaster or emergency affecting only the areas under USCG jurisdiction. (Precise jurisdictional boundaries have been determined by EPA/USCG agreements and are described in the NCP as well as in greater detail in the Regional Oil and Hazardous Pollution Contingency Plans (RCPs).) The USCG will receive mission assignments directly from DHS for such responses.

(To provide a smooth interface with the response structure established under the NCP, regional incident-specific lead for ESF #10 may be transferred from one regional chair to the other if circumstances dictate.) In the event that an incident involves both EPA and USCG jurisdictions, EPA will assume the ESF #10 Incident Chair role, with the USCG serving as Vice Chair. Each agency will have the option of transferring the lead agency or specific tasks role to the other; however, the Incident Chair will retain responsibility for effectively addressing the ESF #10 tasks, both NCP and non-NCP.

B. Scope

1. ESF #10 provides for a coordinated response to actual or potential discharges and/or releases of hazardous materials by placing the response mechanisms of the NCP within the FRP coordination structure that ensures the most efficient and effective use of Federal resources. The ESF includes the appropriate response actions to prevent, minimize, or mitigate a threat to public health, welfare, or the environment caused by actual or potential hazardous materials incidents.

2. This ESF establishes the lead coordination roles, the division and specification of responsibilities among Federal agencies, and the national and onsite response organization that may be brought to bear in response actions, including description of the organizations, response personnel, and resources that are available. This ESF is applicable to all Federal departments and agencies with responsibilities and assets to support State and local response to actual or potential discharges and/or releases of hazardous materials.

3. Response to oil discharges and hazardous substance releases will be carried out in accordance with the NCP. The NCP effectuates the response powers and responsibilities created by CERCLA, and the authorities established by Section 311 of the Clean Water Act (CWA), as amended by the Oil Pollution Act (OPA). Under the NCP, an On-Scene Coordinator (OSC), designated by EPA, the USCG, Department of Defense (DOD), or Department of Energy (DOE), would undertake Federal response actions. Appropriate response actions under the NCP include efforts to detect, identify, contain, clean up, or dispose of released hazardous materials. The actions can include stabilization of berms, dikes, or impoundments; capping of contaminated soils or sludge; use of chemicals and other materials to contain or retard the spread of the release or to mitigate its effects; drainage controls; fences, warning signs, or other security or site control precautions; removal of highly contaminated soils from drainage areas; removal of drums, barrels, tanks, or other bulk containers that contain hazardous substances; and other measures as deemed necessary.

4. In addition, ESF #10 may respond to actual or threatened releases of hazardous materials not typically responded to under the NCP but that, as a result of the disaster or emergency, pose a threat to public health or welfare or to the environment. Appropriate ESF #10 response activities to such hazardous materials incidents include, but are not limited to, household hazardous waste collection, permitting and monitoring of debris disposal, water quality monitoring and protection, air quality sampling and monitoring, and protection of natural resources.

C. Relation to Existing Response under the National Contingency Plan, the National Response System, and the National and Regional Response Teams

1. Coordination of response actions carried out under this ESF is in accordance and does not conflict with the NCP duties and responsibilities of the National Response Team (NRT) and Regional Response Teams (RRTs) as carried out through the National Oil and Hazardous Substances Response System (NRS). The NRS is a highly organized network of agencies, programs, and resources with authorities and responsibilities in hazardous materials response. Key components of the NRS include the NCP, the NRT/RRTs, the National Response Center (NRC), and Area Contingency Plans. States participate in the NRS at the regional level.

2. The NRT, comprised of 16 Federal agencies with major environmental and public health responsibilities for oil and hazardous substance releases, is the primary vehicle for coordinating Federal agency activities under the NCP. The NRT carries out national planning and response coordination and oversees the NRS. EPA chairs the NRT, while the USCG serves as Vice Chair. At the headquarters (HQ) level, activities under this ESF provide a bridge between the NRT and the Catastrophic Disaster Response Group (CDRG). The NRT participates in FRP-activation preparedness activities under this ESF and is expected to be closely involved in response activities if this ESF is activated. EPA is the Regional Chair of ESF #10 for incidents within its jurisdiction. For disasters that occur where the USCG has jurisdiction, the USCG is the Regional Incident Chair of ESF #10. (EPA would remain the National Chair with active USCG participation and support at the CDRG.)

3. The RRTs comprise regional representatives of the Federal agencies on the NRT as well as a representative from each State within the region and are co-chaired by EPA and the USCG. The RRTs serve as planning and preparedness bodies before a response. During a response, RRTs marshal their respective agency response resources and

provide coordination and advice to the Federal OSC(s). Each RRT participates in preparedness activities under this ESF and is expected to be closely involved in response activities if this ESF is activated. At the regional level, activities under this ESF provide a bridge between the on-site OSC-directed NCP response (with RRT support) and the overall FRP disaster response activities carried out at the Disaster Field Office (DFO) and managed by a Federal Coordinating Officer (FCO). The OSCs will carry out their responsibilities under the NCP to coordinate, integrate, and manage the Federal effort to detect, identify, contain, clean up, or dispose of or minimize releases of oil or hazardous substances, or prevent, mitigate, or minimize the threat of potential releases. Their efforts will be coordinated under the direction of the ESF Regional Incident Chair, who is also the EPA or USCG RRT Co-Chair.

4. **If the FRP is invoked and there are hazardous materials releases necessitating the activation of this ESF, the NRT/RRTs would carry out their duties and responsibilities as put forth in the NCP and agency implementing procedures.** Those efforts will focus largely on specific oil and hazardous substances releases that may occur throughout the affected geographic area. There is a need, however, for a single coordination mechanism for the Federal hazardous materials response as provided through this ESF because:

. . .

II. Policies

A. National Contingency Plan

The NCP serves as the basis for planning and use of Federal resources for responding to releases or threats of releases of oil or hazardous substances. Response actions under this ESF will follow the policies, procedures, directives, and guidance developed to carry out provisions in the NCP.

. . .

IV. Concept of Operations

A. Scope

1. EPA will serve as the National Chair and lead agency for each activation of ESF #10, with close coordination with the USCG in geographic locations under USCG jurisdiction. EPA will be the ESF #10 Regional Chair in preparedness and for ESF #10 activations in response to a disaster or emergency affecting areas under EPA jurisdiction. The USCG will be the ESF #10 Regional Incident Chair for a disaster or emergency affecting only areas under USCG jurisdiction.

2. The operational response prescribed in the NCP and any agency implementing procedures that contribute to response will be coordinated through this ESF.

. . .

B. Organization

Figure ESF #10-1 depicts the national and regional organizational structure for this ESF for situations in which oil and/or hazardous substance incidents occur and the NCP is implemented.

. . .

1. National-Level Response Support Structure

. . .

e. Policies and procedures in the NCP will be adhered to in carrying out an oil/ hazardous substance response. In certain circumstances, some administrative procedures in the NCP can be streamlined during the immediate response phase. The ESF Chair will

consult the NRT for advice and assistance in carrying out activities under this ESF. Likewise, the ESF Regional Chair will consult the RRT for such advice or assistance.

f. In some cases (see Sections I.B and III.A), ESF #10 may respond to releases or threatened releases of hazardous materials not typically responded to under the NCP. Applicable policies and procedures in the NCP will be adhered to in carrying out these hazardous materials responses.

. . .

2. Regional-Level Response Structure

. . .

j. The OSC directs oil and hazardous substance response efforts and coordinates all other Federal efforts at the scene of a discharge or release. Specific response efforts are noted in the NCP and include actions taken as soon as possible to prevent, minimize, or mitigate a threat to public health or welfare, or the environment.

. . .

[Emphasis has been added. Text above starts at page 3, and then page 120 of the PDF version of the FRP posted at the FEMA website, http://www.fema.gov/rrr/frp/]

EPA regulations also require EPA to invoke and follow the NCP in declared disasters

The following EPA regulations under the NCP also show that EPA has no recourse but to invoke the NCP whenever there is a release of hazardous materials in a disaster:

Subpart B -- Responsibility and Organization for Response

. . .

§300.105 General organization concepts.

(a) Federal agencies should:

(1) Plan for emergencies and develop procedures for addressing oil discharges and releases of hazardous substances, pollutants, or contaminants;

(2) Coordinate their planning, preparedness, and response activities with one another;

(3) Coordinate their planning, preparedness, and response activities with affected states, local governments, and private entities; and

(4) Make available those facilities or resources that may be useful in a response situation, consistent with agency authorities and capabilities.

(b) Three fundamental kinds of activities are performed pursuant to the NCP:

(1) Preparedness planning and coordination for response to a discharge of oil or release of a hazardous substance, pollutant, or contaminant;

(2) Notification and communications; and

(3) Response operations at the scene of a discharge or release.

. . .

§300.125 Notification and communications.

(a) The National Response Center (NRC), located at USCG Headquarters, is the national communications center, continuously manned for handling activities related to response actions. . . . The NRC receives and immediately relays telephone notices of discharges or releases to the appropriate predesignated federal OSC. The telephone report is distributed to any interested NRT member agency or federal entity that has established a written agreement or understanding with the NRC. The NRC evaluates incoming

information and immediately advises FEMA of a potential major disaster situation.

§300.130 Determinations to initiate response and special conditions.

. . .

(h) If the situation is beyond the capability of state and local governments and the statutory authority of federal agencies, the President may, under the Disaster Relief Act of 1974, act upon a request by the governor and declare a major disaster or emergency and appoint a Federal Coordinating Officer (FCO) to coordinate all federal disaster assistance activities. In such cases, the OSC/RPM would continue to carry out OSC/RPM responsibilities under the NCP, but would coordinate those activities with the FCO to ensure consistency with other federal disaster assistance activities.

(i) In the event of a declaration of a major disaster by the President, the FEMA may activate the Federal Response Plan (FRP). A FCO, designated by the President, may implement the FRP and coordinate and direct emergency assistance and disaster relief of impacted individuals, business, and public services under the Robert T. Stafford Disaster Relief Act. Delivery of federal assistance is facilitated through twelve functional annexes to the FRP known as Emergency Support Functions (ESFs). EPA coordinates activities under ESF #10 -- Hazardous Materials, which addresses preparedness and response to hazardous materials and oil incidents caused by a natural disaster or other catastrophic event. In such cases, the OSC/RPM should coordinate response activities with the FCO, through the incident-specific ESF #10 Chair, to ensure consistency with federal disaster assistance activities.

. . .

4.3 Relation to others plans.

4.3.1 Federal response plans. In the event of a declaration of a major disaster by the President, the FEMA may activate the Federal Response Plan (FRP). A Federal Coordinating Officer (FCO), designated by the President, may implement the FRP and coordinate and direct emergency assistance and disaster relief of impacted individuals, business, and public services under the Robert T. Stafford Disaster Relief Act. Delivery of federal assistance is facilitated through twelve functional annexes to the FRP known as Emergency Support Functions (ESFs). EPA coordinates activities under ESF #10 -- Hazardous Materials, which addresses preparedness and response to hazardous materials and oil incidents caused by a natural disaster or other catastrophic event. In such cases, the OSC should coordinate response activities with the FCO, through the incident-specific ESF #10 Chair, to ensure consistency with federal disaster assistance activities.

. . .

[emphasis added] [Title 40 of the Code of Federal Regulations, Part 300 (40 CFR §300, http://www.epa.gov/epahome/cfr40.htm]

EPA publications state that EPA will invoke the NCP after terrorism events

The following brochure, prepared more than a year before 9/11/01, specifies that EPA will respond to releases of hazardous substances from terrorism events under the NCP authority.

The U.S. Environmental Protection Agency (EPA) has statutory authorities and responsibilities to prepare for and respond to emergencies involving oil and hazardous substances, pollutants or contaminants, which include chemical, biological and

radiological materials that could also be components of a weapon of mass destruction (WMD). A WMD is defined as a weapon, device, or large conventional explosive that produces catastrophic loss of life or property. EPA carries out its preparedness and response efforts primarily under the mandate of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and the Radiological Response Program. EPA provides technical support, response coordination and management, and resource assistance to local and state first responders under the National Response System (NRS). The NRS is the federal government's mechanism for emergency response to releases of hazardous substances, pollutants, and contaminants and discharges of oil that threaten human health and the environment. The NRS is fully described in the NCP at 40 CFR Part 300.

Additional EPA Responsibilities In recognition of EPA's responsibilities, capabilities and experience, Presidential Decision Directive (PDD) #39 assigned EPA the task of assisting the FBI in threat assessments and determining the type of hazards associated with releases or potential releases of materials in a terrorist incident. EPA is also assigned to assist the Federal Emergency Management Agency (FEMA) with environmental monitoring, decontamination, and long-term site cleanup. EPA is the lead agency for hazardous materials response under Emergency Support Function (ESF) #10 of the Federal Response Plan (FRP). PDD #62 reinforces EPA's mission to enhance the nation's capability to prevent and respond to terrorist events involving WMD. PDD #63, which addresses the protection of America's critical infrastructure, named EPA the lead agency for the Water Supply Sector. Under these and other Federal authorities, EPA may participate during the crisis and consequence management phases of a terrorist incident response and may prevent and prepare for deliberate releases resulting from terrorist incidents.

. . .

Federal On-Scene Coordinators (OSCs) The Federal OSC is the primary federal representative at responses conducted under the NRS. Federal OSCs work with State, local, and private responders to protect human health and the environment. The Federal OSC is the point of contact for the coordination of federal efforts with the local response community. EPA OSCs possess the authority to manage all response efforts at the scene of an incident, and can call upon a variety of specialized equipment and highly trained personnel.

. . .

[EPA CAPABILITIES: RESPONDING TO NUCLEAR-BIOLOGICALCHEMICAL (NBC) TERRORISM, 5/02, EPA Publication No. EPA 550-F-00-008, http://yosemite.epa.gov/R10/CLEANUP.NSF/9f3c21896330b4898825687b007a0f33/c8bff6f309e0ad2888256aa4006ae05d/$FILE/terrorism2000.pdf]

Essentially the same information provided in the brochure above was also provided in a 1997 EPA publication titled: "EPA Capabilities: Responding to Nuclear-Biological-Chemical (NBC) Terrorism, EPA OIL AND HAZARDOUS SUBSTANCES RESPONSE CAPABILITIES," which may be found at the following web site: http://www.epa.gov/swercepp/pubs/cntr-ter.html .

The following is from a 1997 document, where EPA set forth its terrorism planning in response to the Oklahoma City bombing and the Sarin gas attacks in Tokyo. The invocation of the NCP for such events is spelled out in detail. The important thing about this particular document is that it specifies that EPA will invoke the NCP authority for terrorism events like bombings, not just for

weapons of mass destruction (anthrax, poisonous gas, dirty bombs).

> As a result of several recent terrorist incidents, including the Sarin gas incident in Tokyo and the bombing of the Murrah building in Oklahoma City in 1995, federal attention and resources dedicated to counter-terrorism (CT) have grown significantly
> . . .
> The majority of EPA Headquarter's CT activities in FY97 involved participation in the federal-wide CT *[counter terrorism]* initiatives. EPA has been participating in several interagency federal groups to ensure the inclusion of the National Response System (NRS) in CT efforts. EPA has also been working to internally improve readiness in the CT arena.
> . . .
> In FY97 EPA HQ conducted the following interagency and intra-Agency coordination activities: Provided numerous briefings to both internal and external audiences to ensure that parties understood EPA's role and responsibilities under the National Contingency Plan (NCP) and the implications for Counter-Terrorism activities.
> . . .
> Several regions also conducted outreach activities to promote coordination among key players (e.g., SERCs/LEPCs and FEMA). . . . Several regions have met with staff from federal agencies to discuss their respective roles in CT operations (e.g., Region 1 with FEMA, the FBI, and USCG).
> . . .
> *[FISCAL YEAR 1997 REPORT: EPA'S COUNTER-TERRORISM ACTIVITIES AND ACCOMPLISHMENTS, CHEMICAL EMERGENCY PREPAREDNESS & PREVENTION OFFICE, OFFICE OF SOLID WASTE & EMERGENCY RESPONSE, U.S. ENVIRONMENTAL PROTECTION AGENCY, http://www.epa.gov/swercepp/pubs/execsum.pdf]*

EPA admits operating under the NCP for the WTC disaster

For over a year after 9/11/01, EPA did not admit that it was operating under the NCP in the WTC evaluation and cleanup. It did not deny it, either, but obfuscated the fact very carefully.

The following is Administrator Whitman's 9/24/02 testimony before the Senate Committee on Environment and Public Works which makes it clear that EPA was operating under the NCP:

> EPA accomplished a remarkable achievement in responding to three national incidents during the same time period; the attacks on the World Trade Center and Pentagon, and anthrax contaminated buildings. Drawing upon the many years of EPA experience in responding to the release of hazardous substances, and the technical and scientific expertise found within the Agency, the outstanding men and woman of EPA performed unprecedented tasks.
> . . .
> Today, my testimony will discuss EPA's role in homeland security, how the Agency responded to the attacks of last year, the lessons learned, and how EPA plans to address homeland security issues.
> . . .

EPA has led the National Response System (NRS) for over 30 years. The NRS is the system by which our local, state and Federal responders address hazardous material and oil spill emergencies. These contaminants can include chemical, biological, and radiological materials that also could be components of Weapons of Mass Destruction (WMD). The Agency's basis for its emergency response program is outlined under the National Oil and Hazardous Substances Pollution Contingency Plan. The NRS was originally authorized under the Clean Water Act and supplemented by the authorities of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), and is codified by the National Contingency Plan (NCP). The National Response Team (NRT), established by the NCP, consists of 16 Federal agencies with responsibilities, interests, and expertise in various aspects of emergency response to pollution incidents. The EPA serves as chair and the Coast Guard serves as vice chair of the NRT.

. . .

The NRT also completed Anthrax and World Trade Center / Pentagon Lessons Learned Documents for use by member agencies and developed Anthrax clean-up technical assistance documents for use by planners and responders at all levels of government.

. . .

EPA has important roles in U.S. counterterrorism activities. . . . EPA, as the lead agency for Hazardous Materials Response under Emergency Support Function (ESF) #10 of the Federal Response Plan, also assists the Federal Emergency Management Agency, during consequence management with environmental monitoring, decontamination, and long-term site cleanup.

. . .

EPA RESPONSE AT WORLD TRADE CENTER

As soon as the first plane hit the North Tower, EPA activated its emergency response personnel from its Regional office in lower Manhattan. Before anyone knew the tragic consequences of the attack, EPA's responders were headed to the site to monitor the cloud of smoke and dust.

. . .

[emphasis added] [STATEMENT OF GOVERNOR CHRISTINE TODD WHITMAN ADMINISTRATOR U.S. ENVIRONMENTAL PROTECTION AGENCY BEFORE THE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS 9/24/02, http://www.epa.gov/ocirpage/hearings/testimony/092402ctw.PDF]

EPA responds to disaster under NCP by appointing "On Scene Coordinators" – EPA still using OSC's as of October, 2002

EPA only uses OSC's under CERCLA/NCP

EPA began it disaster response effort by appointing an "On Scene Coordinator," a formal title under the CERCLA/NCP authority. This title is not used under any other EPA statutory authorities such as the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, etc. See the following from the CERCLA/NCP regulations:

40 CFR §300.120 On-scene coordinators and remedial project managers: general responsibilities.

(a) The OSC/RPM directs response efforts and coordinates all other efforts at the scene of a discharge or release. As part of the planning and preparedness for response, OSCs shall be predesignated by the regional or district head of the lead agency. EPA and the USCG shall predesignate OSCs for all areas in each region, except as provided in paragraphs (c) and (d) of this section. RPMs shall be assigned by the lead agency to manage remedial or other response actions at NPL sites, except as provided in paragraphs (c) and (d) of this section.

. . .

(e) The OSC is responsible for overseeing development of the ACP *[area contingency plan]* in the area of the OSC's responsibility. ACPs shall, as appropriate, be accomplished in cooperation with the RRT *[rapid response team]*, and designated state and local representatives. In contingency planning and removal, the OSC coordinates, directs, and reviews the work of other agencies, Area Committees, responsible parties, and contractors to assure compliance with the NCP, decision document, consent decree, administrative order, and lead agency-approved plans applicable to the response.

. . .

(2) Federal-lead non-Fund-financed response: The RPM coordinates, directs, and reviews the work of other agencies, responsible parties, and contractors to assure compliance with the NCP, Record of Decision (ROD), consent decree, administrative order, and lead agency-approved plans applicable to the response. Based upon the reports of these parties, the RPM shall recommend action for decisions by lead agency officials. The RPM's period of responsibility begins prior to initiation of the RI/FS, described in §300.430, and continues through design and remedial action and the CERCLA cost recovery activity. The OSC and RPM shall ensure orderly transition of responsibilities from one to the other.

(3) The RPM shall participate in all decision-making processes necessary to ensure compliance with the NCP, including, as appropriate, agreements between EPA or other federal agencies and the state. The RPM may also review responses where EPA has preauthorized a person to file a claim for reimbursement to determine that the response was consistent with the terms of such preauthorization in cases where claims are filed for reimbursement.

. . .

(g)(1) Where a support agency has been identified through a cooperative agreement, Superfund Memorandum of Agreement (SMOA), or other agreement, that agency may designate a support agency coordinator (SAC) to provide assistance, as requested, by the OSC/RPM. The SAC is the prime representative of the support agency for response actions.

(2) The SAC's responsibilities may include:
(i) Providing and reviewing data and documents as requested by the OSC/RPM during the planning, design, and cleanup activities of the response action; and
(ii) Providing other assistance as requested.

(h)(1) The lead agency should provide appropriate training for its OSCs, RPMs, and other response personnel to carry out their responsibilities under the NCP.

(2) OSCs/RPMs should ensure that persons designated to act as their on-scene representatives are adequately trained and prepared to carry out actions under the NCP,

to the extent practicable.

EPA appointed OSC's before any formal FEMA involvement

In the initial period after 9/11, the EPA On Scene Coordinator (OSC) was highly visible at Ground Zero. A draft timeline prepared by EPA gives the following sequence of events, including the appointment of an OSC:

08:50 Headquarters EOC activated
09:01 Began coordination conference call between
HQ and Region 2
09:10 Established conference call bridge using
GETS system w/ Regions 1-4
10:00 Coordination began between EPA and New York and Virginia

[9/11/01 afternoon events]

Region 2
Deployed 4 On-Scene Coordinators (OSCs) to NY
Began 24-hour operations in Edison, NJ
Collected 4 dust samples in vicinity of WTC
Initiated daily ambient air monitoring program downwind from WTC
Coordinated with NYC and OSHA

Region 3
Deployed 4 OSCs: VA EOC, DC EOC, FEMA ROC, Ft. Meade
Deployed 4 START with OSC to Ft. Meade

Headquarters
Began 24-hour operation at Emergency Operations Center
Prepared for Continuity of Operations Plan (COOP) activation
Removed EPA's website to protect against hackers & secure data (OEI)
Staffed FEMA Emergency Support Team (EST)
Staffed FBI Strategic Information Operations Center (SIOC)
Took precautions to ensure payroll for all EPA employees
Discussion of permitting issues for air and waste with Regions 2 and 3

Administrator
Held 3 conference calls with all AAs and RAs
Sent 2 voicemail updates to all employees

President issues major disaster declaration for WTC - 7:30 pm
FEMA-1391-DR-NY
. . .
[EPA Timeline: Response to Events of September 11, 2001, Draft - 10/12/01, posted on EPA internal web pages]

EPA was still using OSC's as of October, 2002

The duties of an EPA OSC are broad, as seen from the earlier excerpts of the CERCLA/NCP regulations describing OSC's. It is documented that EPA was still using an OSC for its 110 Liberty St. pilot cleaning study in October of the year 2002, over a year after the disaster:

> After the initial cleaning of each unit, the OSC reviewed the established cleanup criteria, reviewed the analytical results, and provided direction as to which units required additional cleaning.
> . . .
> *[Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, p. 8, http://epa.gov/wtc/confirmation_clean_study.htm]*

It might be a good subject of a Freedom of Information Act request to obtain all documentation on the assignment and activities thereby of EPA Region 2 "On Scene Coordinators" after the WTC disaster.

Violation of statutory authority if EPA is not operating under the NCP

If EPA is not operating under the NCP, then it is operating outside of its statutory authority in the assessment of hazards and cleanup of WTC fallout. The interagency agreement between EPA and other federal agencies, the Federal Response Plan (FRP) described earlier, does not give EPA any additional statutory authority under which to act.

No federal agency can take any action unless it has the legal authority to do so. It would be like the Department of Defense declaring war all by itself, without having the President declare war first. EPA can't just do things related to the environment as it sees fit. For cleanups of spills and other releases of hazardous materials in the absence of currently controlling responsible parties, that statutory authority is under the CERCLA, which includes the NCP.

The following is from the Administrative Procedures Act (APA). If an agency acts outside of its legal mandate, then the agency can be sued for taking action "in excess of statutory jurisdiction, authority, or limitations."

> 5 U.S.C. § 706. Scope of review
> To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall -
> (1) compel agency action unlawfully withheld or unreasonably delayed; and
> (2) hold unlawful and set aside agency action, findings, and conclusions found to be -
> (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;
(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;
(D) without observance of procedure required by law;
(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or
(F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court. In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.
. . .
[http://www4.law.cornell.edu/uscode/5/plch5schII.html]

The following is from the CERCLA statute itself:

U.S. Code TITLE 42--THE PUBLIC HEALTH AND WELFARE
CHAPTER 103--COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY
SUBCHAPTER III--MISCELLANEOUS PROVISIONS
Sec. 9659. Citizens suits

(a) Authority to bring civil actions
Except as provided in subsections (d) and (e) of this section and in section 9613(h) of this title (relating to timing of judicial review), any person may commence a civil action on his own behalf
(1) against any person (including the United States and any other governmental instrumentality or agency, to the extent permitted by the eleventh amendment to the Constitution) who is alleged to be in violation of any standard, regulation, condition, requirement, or order which has become effective pursuant to this chapter (including any provision of an agreement under section 9620 of this title, relating to Federal facilities); or
(2) against the President or any other officer of the United States (including the Administrator of the Environmental Protection Agency and the Administrator of the ATSDR) where there is alleged a failure of the President or of such other officer to perform any act or duty under this chapter, including an act or duty under section 9620 of this title (relating to Federal facilities), which is not discretionary with the President or such other officer.
. . .
(c) Relief
The district court shall have jurisdiction in actions brought under subsection (a)(1) of this section to enforce the standard, regulation, condition, requirement, or order concerned (including any provision of an agreement under section 9620 of this title), to order such action as may be necessary to correct the violation, and to impose any civil penalty provided for the violation. The district court shall have jurisdiction in actions brought under subsection (a)(2) of this section to order the President or other officer to perform the act or duty concerned.
. . .
[From the U.S. Code Online via GPO Access, www.wais.access.gpo.gov , Laws in effect as of January 23, 2000 [CITE: 42USC9659]]

Congressman Nadler critical of EPA violation of law if not using NCP

> By allowing indoor air quality in residential and commercial buildings to be handled by the City of New York, and by not properly exercising its oversight authority pursuant to the National Contingency Plan (NCP), the EPA violated federal law.
> . . .
> The EPA must act in accordance with the NCP, and take action immediately to systematically and properly test and remediate all downtown buildings affected by the World Trade Center tragedy, using properly trained personnel and the best-available equipment and methods tied to genuine, established health-based standards.
> . . .
> By allowing indoor air quality in residential and commercial buildings to be handled by the City of New York, and by not properly exercising its oversight authority, the EPA violated federal law. The EPA has the clear authority to respond to the release of hazardous substances that may present an imminent and substantial danger to public health. The National Contingency Plan (NCP), which is administered by the EPA and authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), is the federal plan for responding to such a release. The NCP lays out specific procedures and guidelines, including the designation of an On-Scene Coordinator (OSC) who is responsible for directing response efforts and coordinating all other efforts at the scene of a discharge or release. The federal regulations make clear that the EPA has the authority to respond to the release of hazardous substances pursuant to the NCP, and that this authority is carried out by EPA On-Scene Coordinators.
> . . .
> However, EPA's statement that it is merely following FEMA and the Federal Response Plan, and its characterization of this plan, is misleading for a number of reasons. First, the Stafford Act does not supercede the EPA statutes. All activities under FEMA must comply with national environmental policies. The Federal Response Plan also clearly states that other federal emergency response plans cannot be disregarded, but rather implemented concurrently when there is an incident involving hazardous substances. The FRP specifically lists the NCP as one such emergency response plan. Second, and most importantly, the FRP actually triggers the National Contingency Plan. According to the Code of Federal Regulations, "the NCP applies to and is in effect when the Federal Response Plan and some or all its Emergency Support Functions (ESFs) are activated." Therefore, if the EPA is not acting pursuant to the National Contingency Plan, it is in clear violation of the law.
> . . .
> *[U.S. CONGRESSMAN JERROLD NADLER, WHITE PAPER, LOWER MANHATTAN AIR QUALITY, Last Updated, April 12, 2002, http://www.nyenvirolaw.org/PDF/EPA%20White%20Paper%20Final%204_121.pdf or http://www.911digitalarchive.org/objects/112.pdf]*

EPA has obfuscated fact that its operations are under the NCP

By either not publically admitting, or denying outright that it is operating under the NCP, EPA gains several advantages:

a. Public oversight of its activities is more difficult. The public will more likely believe EPA when it claims that indoor air issues could be delegated or left up to NYC, and that EPA had no authority over NYC to force them to follow through or have indoor air standards as stringent as EPA.

b. A Superfund-like stigmatization is avoided. The NCP is part of the same umbrella EPA statute, CERCLA, that includes Superfund. Although an NCP cleanup is not necessarily a Superfund cleanup, it could be or could become one. People equate the CERCLA statute with Superfund, even though CERCLA includes more. If you do a search of the EPA web site, you will even see that EPA uses the phrase "CERCLA, or Superfund" almost 200 times, although this phrase is not strictly correct.

c. By not admitting to acting under the NCP authority, EPA was able to claim that the unsafe AHERA air standard applied, instead of using an air level for asbestos based on safety at the one in a million risk level as required by the NCP.

d. By not admitting to acting under the NCP, EPA was able to point to the Clean Air Act asbestos NESHAP guidance of 1% asbestos in settled dust as a controlling action level. Asbestos risk evaluations under the NCP never use this 1% level, but instead always use a calculation of risk from exposure, which is much lower than 1% for asbestos in buildings.

e. Public comparison with other NCP cleanups is avoided. A prime example is the cleanup of the Libby, Montana site where asbestos was being removed from residences under the NCP long before the Libby site was designated a Superfund site.

Obfuscation of fact that EPA was operating under the NCP by EPA Region 2 Counsel

EPA never made any statements to the press or on its website that it was acting under the NCP/CERCLA authority. In contrast, EPA clearly stated that it was acting under the authority of the NCP in the cleanup of the Hart Senate Office Building. See my memorandum of 2/7/02 as well as the EPA web page at www.epa.gov/epahome/hi-anthrax.htm .

It appears EPA's obfuscation worked so well that even EPA's own Office of the Inspector General was unaware that EPA was operating under the NCP in the WTC investigation and cleanup, as seen from their 1/27/03 report. Alternatively, the EPA IG may be intentionally perpetuating the myth that EPA is not operating under the NCP in the WTC disaster.

In a 2/22/02 letter to Congressman Nadler, Administrator Whitman described EPA's role in the WTC testing and cleanup as follows. Although she admitted that several of the FRP Emergency Support Functions were activated (presumable ESF #10 included), she walked around the issue that FEMA had assigned all environmental matters to EPA, and that EPA was operating under the

NCP. Congressman Nadler replied to this letter from Whitman on 3/7/02, asking specifically about the NCP, but apparently received no reply from Whitman.

> Our Agency's personnel were on the scene almost immediately, and have been working closely with the Federal Emergency Management Agency (FEMA) since President Bush's declaration of a federal disaster at the World Trade Center. The President's declaration triggered the Federal Response Plan and directed FEMA to coordinate various federal, state, and local agencies and the American Red Cross in carrying out thirteen distinct Emergency Support Functions. The Environmental Protection Agency (EPA) has served in a supporting role to the City of New York and the State of New York, consistent with the Federal Response Plan and mission assignments from FEMA.
>
> In response to your concerns that authority was not properly delegated to the City of New York, it is important to note that under the Federal Response Plan local governments have primary responsibility for responding to an event. Those governments however, can turn to the federal government for assistance where they need it. In this event, the City of New York asked, through FEMA, that EPA assume lead responsibility for monitoring the outdoor conditions at and around the site of the event and for decontaminating the streets and other outdoor public areas. As explained in the enclosed Summary of Current Actions from October 6, the City assumed responsibility for indoor testing and the reoccupancy of buildings.
> . . .
> All this being said, I believe that Congress and the Administration need to revisit the issue of authority and responsibility for indoor environmental conditions in the wake of a terrorist attack. . . . Until such determinations are made, however, we will continue to offer our full support to the City of New York and stand ready to assist with any further requests they may make for our assistance in dealing with indoor environmental issues.
> . . .
> *[letter, Administrator Whitman to US Representative Jerrold Nadler, 2/22/02, posted at the NY Environmental Law and Justice website at www.NYenviroLAW.org]*

The following is from a speech by EPA Region 2 Counsel, which also shows how EPA was obfuscating their operations under the NCP. Regional Counsel Walter Mugdan described only two sets of regulations relevant to asbestos in the WTC collapse, namely the Clean Air Act and the AHERA asbestos in schools act. He omitted the third and most important regulatory authority over asbestos, namely the NCP and the encompassing CERCLA statute.

> EPA has two sets of regulations that deal with asbestos . . . neither set of regulations is directly applicable to the conditions in the wake of the WTC disaster . . . The first set of asbestos-related regulations are part of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) . . . pursuant to . . . the Clean Air Act . . . The second set of regulations are those promulgated by EPA pursuant to the Asbestos Hazard Emergency Response Act (AHERA) . . . The AHERA regulations also include a "clearance" standard for inside air in school buildings to be used after asbestos abatement work has been completed, in order to ensure that the space is safe for re-entry by children, teachers and other employees. . . .
> . . .
> *[Mugdan, Walter E., Esq. (January 25, 2002) Environmental law issues raised by terrorist events in 2001. Speech before the NY Bar Association.]*

EPA can delegate, but has preemption over local and state authorities

EPA delegated all indoor air matters to NYC, who then made individual citizens responsible:

> The controversy harks back to a decision by the Federal Emergency Management Agency in the days after Sept. 11. FEMA assigned the EPA the task of cleaning up and testing for toxic chemicals in outdoor areas around ground zero. EPA then gave New York City control over indoor areas, including apartments. The city, in turn, delegated to building owners and residents the job of doing the actual cleanup and testing.
> . . .
> *[AFTERMATH OF TERROR, Bureaucratic Buck-Passing Delayed Asbestos Cleanup After 9/11 Attacks, By JIM CARLTON, 5/9/02, THE WALL STREET JOURNAL]*

FEMA assigned all environmental matters to EPA

FEMA assigned all environmental matters to EPA, as it was required to do by law, since the FRP makes EPA the chair and overseer of all environmental matters. FEMA did not parse responsibilities, saying that EPA should address only some of the environmental matters. EPA and its operational statute, the NCP, were the authorities, and any local or state ordinances were preempted by EPA.

The following is a statement from FEMA:

> FEMA assigned the U.S. Army Corp of Engineers to NYC and Virginia to assess and remove the more than one million tons of debris. EPA Regions in NYC and Boston were assigned responsibility to address air quality issues at ground zero and the surrounding area and asbestos removal. Disaster medical and mortuary teams were deployed to New York and the Pentagon. Generators were supplied to Con Edison to restore power and, with it, communications. More than 6,500 federal personnel were deployed to respond to and coordinate the federal response including 1,544 from FEMA and its US&R task forces.
> . . .
> *[The FEMA Story, http://www.fema.gov/doc/ofm/5fema508_story.doc]*

Under the NCP, if EPA delegates to a state or local entity through a cooperative agreement, EPA is required to insure that the entity taking over the task use standards at least and protective as EPA's

The EPA NCP regulations set forth how states and local entities will fit into the umbrella structure of any response to a disaster, such as terrorism. Once a state or local body participates in the disaster response effort, it no longer has complete autonomy. The EPA regulations make it clear that the state or local authority must conduct all actions consistent with the federal NCP. The

EPA NCP regulations also make it clear that EPA is responsible for insuring that any state or local response is at least as protective, or more protective, than EPA standards.

Emphasis has been added in the following excerpts.

> §300.175 Federal agencies: additional responsibilities and assistance.
>
> (a) During preparedness planning or in an actual response, various federal agencies may be called upon to provide assistance in their respective areas of expertise, as indicated in paragraph (b) of this section, consistent with agency legal authorities and capabilities.
> . . .
> (2) EPA chairs the NRT *[National Response Team]*
> . . .
>
> §300.180 State and local participation in response.
> . . .
> (b) Appropriate local and state officials (including Indian tribes) will participate as part of the response structure as provided in the ACP.
>
> (c) In addition to meeting the requirements for local emergency plans under SARA section 303, state and local government agencies are encouraged to include contingency planning for responses, consistent with the NCP, RCP, and ACP in all emergency and disaster planning.
> . . .
> (f) Because state and local public safety organizations would normally be the first government representatives at the scene of a discharge or release, they are expected to initiate public safety measures that are necessary to protect public health and welfare and that are consistent with containment and cleanup requirements in the NCP, and are responsible for directing evacuations pursuant to existing state or local procedures.
> . . .
>
> §300.400 General.
> . . .
> (g) *Identification of applicable or relevant and appropriate requirements.* [*ARAR*]
>
> > (1) The lead and support agencies shall identify requirements applicable to the release or remedial action contemplated based upon an objective determination of whether the requirement specifically addresses a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site.
> > . . .
> > (4) Only those state standards that are promulgated, are identified by the state in a timely manner, and are more stringent than federal requirements may be applicable or relevant and appropriate. For purposes of identification and notification of promulgated state standards, the term *promulgated* means that the standards are of general applicability and are legally enforceable.
> > *[emphasis added]*
> > . . .
> > *[Title 40 of the Code of Federal Regulations, Part 300 (40 CFR §300, http://www.epa.gov/epahome/cfr40.htm]*

The New York City Committee on Environmental Protection found that NYC environmental authority was preempted by EPA in the WTC disaster

The New York City July 4, 2003Council Committee on Environmental Protection recognized that their standards and authority under the NYC Department of Environmental Protection was preempted by EPA after the disaster. The following are statements of Council Member Sabini:

> Based on the information we garnered at last week's hearing, we understand what the City law is and what protocol is under the City law. However, last week when I asked EPA if they were conducting wipe tests in buildings that had been evacuated that are now being reoccupied, or air sampling, they said no.
>
> I was a little amazed to hear that. Based on your knowledge, wouldn't you think that the stewards of the last, court of last appeal for public health, in this case, EPA would want to be doing that and requiring that?
> . . .
> Well, the reason I say EPA is that they're the ultimate arbitrators and we're all preempted by them, so if they were to make the determination, that would be the final determination.
> . . .
> *[emphasis added] [Transcript of the minutes of the Committee on Environmental Protection, City Council, City of New York, 11/8/01, Council Member Sabini, pp. 53-54.]*

EPA demonstrated its preemption authority when reversing the NYC DOH decision to return WTC contaminated cars to owners

EPA constantly protested in letters, testimony, and press statements that it had no jurisdiction over indoor air issues. EPA said that the NYC DOH had that authority, not they. See a compendium of these denial statements later in this section.

However, EPA demonstrated its authority to override any decisions by the NYC DOH, and willingness to do so, in the case of automobiles contaminated with WTC dust. Exposures of citizens to WTC dust in their automobiles is an indoor air issue, just like exposure in residences and offices.

The NYC DOH had decided that it was safe to return these vehicles to owners if the owners performed a do-it-yourself cleaning operation. The NYC DOH prepared do-it-yourself cleaning instructions similar in all aspects to the NYC DOH do-it-yourself cleanup guidelines for residences and offices contaminated with WTC dust (see Section E). But EPA decided that this would be unsafe, and that the automobiles could not be cleaned safely, and should be condemned instead. EPA stepped in and preempted the NYC DOH over the automobile issue.

See the news stories below, and more details in Section D on EPA's admission of hazards from citizen exposures to WTC dust.

New York City officials have reversed a decision made in December and announced that owners of cars and trucks recovered from the World Trade Center would be permitted to retrieve their vehicles. Earlier, the city's health commissioner said the vehicles were potentially contaminated with asbestos and therefore unsafe to return to their owners. Why the turnaround? "Since the fall, data has been presented to the health department collected by a number of agencies, including the FDNY, NYPD, FBI and EPA, and those samples indicated that there were undetectable to low levels of asbestos found in samples taken from the cars," says Greg Butler, a spokesman for the New York City Department of Health.

. . .

[Newsweek, FALLOUT, Driving With Dangerous WTC Dust? 2/18/02]

FOR WEEKS, local, state and federal officials have squabbled over whether the vehicles most of which are coated with fine powder of World Trade Center debris are safe. "We know the dust contains lead, zinc, mercury, asbestos, not to mention organic materials," says New York Congressman Jerrold Nadler. "To release cars to owners is highly irresponsible." On Thursday, Nadler wrote a letter to the Environmental Protection Agency's Christie Todd Whitman urging her to file an emergency injunction against the city to prevent their release. On Friday, the EPA asked the city to meet with its officials before releasing the cars.

The New York City Department of Health told Newsweek it will honor the EPA's request, but that its decision to release the autos was based on careful review of numerous environmental tests. "The data indicates that there is no significant risk to human health," says Kelly McKinney, the NYC Department of Health's Associate Commissioner for Environmental Health. "The fundamental way we work is to gather as much data as we can, to look at that data, compare it with whatever standards are available, compare it with our knowledge of the issues, and that's what we did with this issue as we have with every World Trade Center issue."

. . .

[What To Do With An Auto Graveyard, At the last minute, the EPA prevents the return of cars damaged in the World Trade Center collapse, By Julie Scelfo, NEWSWEEK WEB EXCLUSIVE, 3/15/02, http://www.msnbc.com/news/724974.asp]

Under NCP, EPA has right of access to cleanup indoor air or other contamination

The following are the relevant parts of the NCP regulations contained in Title 40 of the Code of Federal Regulations, Part 300. Not only does EPA have the authority over indoor air and other hazards, it also has the authority for entry without the consent of the building owner.

§300.400 General.

(a) This subpart establishes methods and criteria for determining the appropriate extent of response authorized by CERCLA and CWA section 311(c):

. . .

(d) Entry and access.

(1) For purposes of determining the need for response, or choosing or taking a response

> action, or otherwise enforcing the provisions of CERCLA, EPA, or the appropriate federal agency, and a state or political subdivision operating pursuant to a contract or cooperative agreement under CERCLA section 104(d)(1), has the authority to enter any vessel, facility, establishment or other place, property, or location described in paragraph (d)(2) of this section and conduct, complete, operate, and maintain any response actions authorized by CERCLA or these regulations.
> . . .
> *[Title 40 of the Code of Federal Regulations, Part 300 (40 CFR §300, http://www.epa.gov/epahome/cfr40.htm]*

In 1993, EPA reiterated and clarified its authority for access to the interiors of buildings under the NCP/CERCLA authority by an interpretive memorandum, which stated:

> This directive transmits guidance on the use of authority under §104(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, to conduct response actions to address releases of hazardous substances, pollutants, or contaminants that are found within buildings.
> . . .
> There are currently a number of sites throughout the nation where buildings are contaminated with hazardous substances, pollutants, or contaminants, and where the release or threat of release of these substances may pose a substantial threat to human health.
> . . .
> Another situation involving indoor contamination may be contamination that is the direct result of a release into the environment from a non-natural source that migrates into a building or structure. For example, contamination in a yard may be tracked into a building on the feet of the residents or workers, or may migrate into the building through an open window or basement walls. In this situation, a release into the environment is occurring and has caused a building to become contaminated with the hazardous substance, pollutant, or contaminant.
> . . .
> *[Response Actions at Sites with Contamination Inside Buildings, 8/12/93, From: Henry L. Longest II, Director /s/ Office of Emergency and Remedial Response, To: [EPA Regional Directors], http://www.epa.gov/superfund/resources/remedy/pdf/93-60312-s.pdf]*

“A public health emergency before forced entry” – false EPA claim

From the above, it is clear that EPA’s Mary Mears is making false statements when claiming there would have to be a public health emergency before EPA can gain involuntary access to clean up interiors of buildings:

> Mears, the EPA spokeswoman ... said. "In order for us to demand access to people's homes, it would have to be a public health emergency," Mears said. "We don't think that is the situation we have here at all."
> . . .
> *[LA Times, 9/4/02 - A Toxic Legacy Lingers as Cleanup Efforts Fall Short, By Maggie Farley, Los Angeles Times Staff Writer, September 4, 2002, http://www.latimes.com/news/specials/911/la-na-poison4sep04.story?null]*

EPA admissions of responsibility for indoor air – disaster/terrorism/otherwise

Whitman's 11/28/01 testimony admits to authority over indoor air in terrorism events

EPA Administrator Whitman provided the following testimony on 11/28/01, two months after the WTC disaster. Note that she refers to EPA's role under the Federal Response Plan (FRP), Emergency Support Function 10 (ESF #10), under the NCP in assessing and cleaning up indoor environments either as a result of terrorism or any other disaster. Excerpts from the FRP (which the EPA IG 1/27/03 report says that EPA used) were given earlier in this section, and also refer to the same Presidential Decision Directive (PDD) 62 and Emergency Response Function (ESF) #10 that Whitman does in her speech.

> There are several Presidential Decision Directives (PDDs) that specify a role for EPA in counter terrorism activities. PDD 39 assigned EPA the task of assisting the FBI during crisis management in threat assessments and determining the type of hazards associated with releases or potential releases of materials in a terrorist incident. EPA, as the lead agency for Hazardous Materials Response under Emergency Support Function (ESF) 10 of the Federal Response Plan, is also assigned to assist the Federal Emergency Management Agency, during consequence management with environmental monitoring, decontamination, and long-term site cleanup. PDD 62 reinforces our mission to enhance the nation's capabilities to respond to terrorist events. PDD 63 which addresses the protection of America's critical infrastructure, named EPA the lead agency for the Water Supply Sector.
>
> Under the provisions of PDD 62, signed by President Clinton in 1998, the EPA is assigned lead responsibility for cleaning up buildings and other sites contaminated by chemical or biological agents as a result of an act of terrorism. This responsibility draws on our decades of experience in cleaning up sites contaminated by toxins through prior practices or accidents.
>
> . . .
>
> EPA established and maintains a National Incident Coordination Team (NICT) to assure full agency coordination of all emergency preparedness and response activities including counter terrorism. In the regions, the Agency's first responders are the On-Scene Coordinators (or OSCs). The OSCs have been actively involved with local, state, and federal authorities in preparing for and responding to threats of terrorism.
>
> . . .
>
> *[Statement of Governor Christine Todd Whitman before the Subcommittee on VA, HUD and Independent Agencies of the Committee on Appropriations, 11/28/01, http://yosemite.epa.gov/administrator/speeches.nsf/0/1758d470f63c8b2085256b13004cb3e1?OpenDocument]*

EPA Assistant Administrator's 1/6/03 testimony also states EPA has jurisdiction over indoor air in disaster situations like terrorism

EPA Assistant Administrator Marianne Horinko also confirmed that EPA was responsible for indoor air and operating under the NCP in the event of terrorism or a disaster.. The following is part of a press release from US Representative Jerrold Nadler:

> For more than a year, the EPA has maintained that the City Department of Environmental Protection (DEP) is in charge when it comes to cleaning up indoor workspaces. But, in sworn testimony given last month, the Assistant Administrator of EPA, Marianne Horinko, admitted that Presidential Decision Directive (PDD) 62, which dictates how the federal agencies are to respond to an act of terrorism, mandates that EPA must clean up inside buildings. The transcript from that deposition (Hugh B. Kaufman v. US EPA, Jan. 6 2003) is as follows:
>
> Question: Who in EPA, who is the individual who has the ultimate lead for the cleanup of interiors? Is it you?
>
> Answer: Ultimately I suppose it would be Governor Whitman as the administrator. Since I do report to her, I am certainly the lead on emergency response.
>
> Question: Is cleaning up the interiors an emergency response?
>
> Answer: Yes, it is.
> . . .
> *[NYC WORKFORCE MAY FACE SERIOUS HEALTH RISK, 2/10/03, Rep. Nadler Exposes Bungling of World Trade Center Contaminant Clean-up in Workspaces, Presents New Evidence That EPA Illegally Delegated Authority and Then Lied about Knowledge of the Law, http://www.house.gov/nadler/EPA_021003.htm]*

EPA's 2002 Strategic Plan for terrorism, with preface by Whitman, addresses indoor air

EPA's strategic planning document for terrorism, with a preface signed by Administrator Whitman, describes EPA's authority over indoor air after a terrorism event:

> The terrorist attacks of September 11 and the threat of further harm to U.S. interests have illustrated the necessity for action by the Federal government to prepare and protect the public against the myriad threats posed by terrorism.
> . . .
> Critical Infrastructure Protection
>
> EPA has unique programmatic responsibilities and expertise related to the water and wastewater industries; the use, handling, storage, release, and disposal of chemicals and chemical wastes at industrial facilities; and indoor air quality. In these areas, EPA is committed to assessing and reducing vulnerabilities and strengthening detection and response capabilities for critical infrastructures. In addition, EPA will contribute to similar efforts led by other Federal agencies addressing food, transportation, and energy

> industries, and will provide environmental expertise to support Federal law enforcement activities.
> . . .
> *[emphasis added] [EPA's Strategic Goals in Homeland Security I. CRITICAL INFRASTRUCTURE PROTECTION Strategic Goals, Tactical Action Initiatives, and Benchmarks, http://www.epa.gov/epahome/downloads/epa_homeland_security_strategic_plan.pdf]*

Whitman's speech in Libby, Montana admitted EPA cleanup authority over indoor air in businesses as well as residences under the NCP

Administrator Whitman also stated, just 4 days before the WTC disaster, that EPA had the authority to clean up asbestos in homes as well as businesses in the town of Libby, Montana, whether or not the town was listed as a Superfund site (the equivalent of an National Priorities List listing):

> And because we share that goal I want to assure you of something else. It has never been our plan to look to you to pay for any part of this clean-up, including the clean-up of residential properties.
>
> That is why I am pleased to announce today that EPA is taking an unusual legal step to protect you from future liability, whether or not we end up listing Libby on the NPL *[National Priorities List, or Superfund]*. We will be providing homeowners with legal guarantees called "A No Act ion Assurance" that will prot ect them from EPA's ever seeking to have them assume the costs of cleanup. Similarly, local businesses in Libby that did not know about the hazards of vermiculite before November 1999, and that did not profit from its use, will also receive this guarantee.
> . . .
> *[Remarks of Governor Christine Todd Whitman, Administrator of the U.S. Environmental Protection Agency, at a Town Hall Meeting, Libby, Montana, 9/7/01, http://www.epa.gov/newsroom/]*

Whitman presides over EPA awards ceremony for indoor air cleanups from hazardous waste releases

In the summer of 2001, Administrator Whitman presided over an awards ceremony for regional enforcement and cleanup of indoor air in residences and business.

> In her welcoming remarks, Administrator Christine Todd Whitman noted: "It is fitting that we meet during Earth Week to recognize those regional staffers who are out there in the field every day making a real difference in the lives and health and countless Americans." She also commented on the "leadership, creativity, and hard work of EPA Regional and HQ staff and our State partners in implementing the RCRA cleanup reforms. Whitman quipped, "As I looked over the list of today's winners, I couldn't help but think that maybe I don't have the toughest job at EPA after all... even though there are times we have messes to clean up, they're nothing like the messes you .find out in the .field!" Whitman expressed the Agency's appreciation to the award winners:

. . .
"When it comes to cleaning up a contaminated site, those who live nearby think it can never be done fast or cheaply enough. We would think the same thing if we were in their shoes."
. . .
[EPA Cleanup News, Issue No. 7, Summer 2001, Office of Site Remediation, EPA Publication No. EPA 300-N-01-007, http://www.epa.gov/compliance/resources/newsletters/cleanup/cleanup7.pdf]

Several of the winners of EPA awards concerned the testing or prevention of indoor air exposures to toxic substances from hazardous wastes, as described below. Of particular note is the fact that EPA worked with the states and local authorities and exercised oversight over them, but did not delegate any authority or "wash their hands" of the matter as EPA Region 2 did for indoor air after the WTC collapse.

Outstanding Stakeholder Involvement, Diane Sanelli, Region 8
. . .
Alliant Tech systems site, a data-storage device manufacturer has solvent-contaminated groundwater which spread to an upscale suburban neighborhood. At the Hamilton Sundstrand and Alliant sites, the initial focus has been to determine whether there may be an immediate health threat from vapors in homes and, if so, to install ventilation systems. . . . Diane worked with each homeowner individually to explain why information needed to be gathered, how data would be used, and what would be done if there was a problem. While the type of sampling was the same in every household, Diane arranged for the timing of the sampling and location of the sampling device to be negotiated with each homeowner. She was instrumental in ventilation systems being installed quickly once a problem was identified in a home.
. . .
The Alliant site is located in an affluent suburban area, where residents, some environmental professionals, were highly educated, well connected politically, and felt the company had not been forthcoming with information and had moved too slowly. Because they were concerned about property values and distrusted the company, some initially resisted the plan to sample indoor air. Diane recognized residents desire to be more active in the design of the sampling plan so she put all existing data in the public information center, and met with residents to discuss the draft plan so, if needed, adjustments could be made. Diane also recognized the need to reach out to several business owners and their employees. She arranged meetings with owners and employees so that their issues could be the focus of the discussion.

The Ensign Bickford site, a former explosives plant, which is located in a primarily undeveloped area, is an industrial park, a historic company town, and has a few scattered new homes. While there was no evidence that the contamination has spread beyond the site, the fact that the waste is related to explosives manufacturing had the potential for causing considerable alarm. . . . Diane was careful to bring the local health department and county officials into the planning process so that they were in agreement with the indoor air sampling plans. She included the local school district, the Tri County Health Department, Adams County officials, state legislators and the Congressional delegation.
. . .
Outstanding Use of Environmental Indicators, William Lowe, Region 7

William (Bill) Lowe currently manages 10 EPA-lead corrective action facilities, provides key technical support on an additional 15 facilities, and coaches/mentors seven other project managers in RCAP

. . .

Sherwin Williams' groundwater sampling indicated an apparent release of metals so Bill worked with them to change their method to a "low flow" minimal disturbance technique. . . . As part of this monitoring plan, trigger levels in groundwater were established for potential indoor air exposure concerns.

. . .

Outstanding Faster, Focused, More Flexible Cleanup Team of the Year, Indoor Air Action Team, Region 8, Felix Flechas, Mary Wu, Thomas Aalto, Randall Breeden

. . .

Due to a resources shortfall at the Colorado Department of Public Health and Environment, Region 8 assumed responsibility for corrective action activities at two Denver area sites where solvent VOC groundwater plumes that had migrated under residential areas Alliant Technologies, Inc. (ATK), and Hamilton Sundstrand, Inc., (HS). . . . Environmental investigations revealed that both soil and ground water was contaminated with VOCs at levels several orders of magnitude above MCLs, and that contamination had migrated into the ground water beneath a residential subdivision. EPA reviewed the existing data to evaluate if public health was impacted by residential indoor air exposure due to groundwater contamination which showed public health was potentially impacted but not at an imminent endangerment level.

. . .

Extensive subsurface contamination was found in the ground water plume which was subsequently found to have migrated off-site beneath a residential area at levels of several orders of magnitude above MCLs. Based on a preliminary EI investigation, it was determined that an interim measure needed to be implemented, so a ground water barrier system was installed along the facility boundary to mitigate the flow of contaminated ground water to the residential area. . . . Due to the very rapid manner in which ventilation systems have been installed in homes, HS may already be close to achieving the EI for human health in the residential area, and as a result of the interim measure, the contaminants in groundwater have been reduced to approximately one order of magnitude over their respective MCL values. . . . The Team worked with the state to evaluate environmental conditions at the facilities, modeled all existing data to determine appropriate Federal authorities to use, and coordinated development of EPA orders with the state.

. . .

[RCRA Corrective Action Award Recipients, 2001, http://www.epa.gov/superfund/new/awards/rcra/index.htm#correct]

EPA denials of authority over indoor air after the WTC collapse

Despite the clear authority of EPA over indoor air under the NCP, and admissions by EPA that it has authority over contamination of the interiors of buildings, EPA took every opportunity to deny this authority after the WTC disaster.

If EPA believed that it was misquoted in the press, it did nothing to correct these misconceptions.

EPA had the ability to set the record straight by the simple mechanism of issuing a press release. Press releases are posted on the EPA website at www.epa.gov for both Headquarters and Region 2, and a complete archive is maintained. No press release was ever issued disclaiming reports in the media quoting EPA as saying they had no authority over indoor air after the WTC disaster.

By intentionally giving the false impression that EPA had no responsibility for indoor air, EPA placed the burden on common citizens to attempt the unfamiliar and traumatic tasks of testing for themselves, and then for either do-it-yourself cleanups using the NYC DOH guidelines (as recommended by EPA), or paying for professional abatement of uncertain quality, or choosing whether to relocate and violate leases, or fight court battles with landlords over abatements.

People either feared for their own health, or worried about their children's risk if not their own. Citizens suffered the immediate effects of asthma, reactive airway disease, and cardiovascular problems after making the knowing choice to follow EPA's advice and remain in contaminated surroundings. And there will be cases of mesothelioma and lung cancer in the future, where WTC exposures cannot be ruled out as the causative factor.

All this trauma and compromised health, if not also a large financial burden, for no reason other than EPA denials it had the authority over indoor air, also claiming there were no hazards, washing their hands of the matter. If at least EPA had admitted that it had the option of exercising its authority under the NCP over indoor air, and admitted that all its WTC actions were pursuant to the NCP, then elected officials and others could have more effectively lobbied EPA for a more prompt response to the needs of the living victims of the WTC.

Compendium of denials by EPA of authority over indoor air after the WTC

The following compendium is where EPA denied it has authority over indoor air issues after the WTC collapse, emphasis added.

> Good Afternoon,
>
> Per our conversation this morning, below is the information we discussed earlier today including web pages to enable you to obtain additional information.
>
> Since you work very close to the World Trade Center (WTC), it is important to discuss the effects of both the ambient (outside) and indoor air quality on the health of you and your family. ... presentation made by the Acting Deputy Regional Administrator, Ms. Kathleen Callahan, on November 1st. ...
>
> Indoor Air Quality (IAQ)
>
> The EPA does not have jurisdiction or oversight of indoor air quality or indoor cleanups. New York City (NYC) has the primary authority and responsibility for re-occupancy of buildings and health issues.
>
> . . .
>
> *[boiler-plate form follow-up letter from Region 2 to residents who inquired. Unknown date, but at least after the 11/1/01 speech by Callahan. Made available by EPA in response to*

a FOIA request from the NY Environmental Law and Justice Project]

11/27/01

Dr. Jenkins further asserts that EPA should have taken steps to "require" the NYCDOH guidelines to be changed "to be as strict as the EPA national regulations." EPA has no authority to do so.

[Refers to the unsafe do-it-yourself cleanup guidelines for residences and offices issued by the NYC Dept. of Health, described in greater detail in Section E on cleaning.]

. . .

[DRAFT: November 27, 2001, ATTORNEY WORK PRODUCT, ATTORNEY-CLIENT COMMUNICATION, signed by Walter Mugdan, EPA Region 2 Counsel. [83]*]*

1/11/02

As to whether that money could be used to help in cleanup of homes and offices, however, Martyak notes, "indoor air is beyond EPA's jurisdiction."

. . .

[MSNBC, 1/11/02 -Yearning to breathe in a toxic zone, by Francesca Lyman]

1/13/02

None of the thousands of tests that the EPA cites as showing the asbestos risk is minimal were taken inside the buildings and rooms where people live, study and work.

"That's just not our job, and we have no policies or procedures for doing that type of testing," said Bonnie Bellow, spokeswoman for the EPA's region II office in New York. "We've never had to worry about asbestos in houses before."

. . .

[NY officials underestimate danger, by Andrew Schneider, Published in the A-section of the St. Louis Post-Dispatch on Sunday, January 13, 2002. Updated article on 1/13/03 posted at http://www.stltoday.com/stltoday/news/stories.nsf/news/85C8BC166AC08DEE86256CAF00051C2E?OpenDocument&highlight=2%2Cworld%2Ctrade%2Ccenter%2Cattack%2Casbestos&headline=World+trade+center+attack+asbestos+health+threat]

1/22/02

An EPA Region II spokesperson went a step further later in January and stated the EPA had taken no responsibility for indoor air quality and was, in fact, satisfied by the City's work. That spokesperson stated, "The EPA's job was to monitor outdoor air. Monitoring indoors--that wasn't our job. That's what the city took care of." According to the article, she added "that she felt the city did a good job of testing and monitoring indoor air."

. . .

[Rogers, Josh, "Nadler says EPA is Passing the Buck Downtown," Downtown Express, January 22, 2002, as cited by U.S. CONGRESSMAN JERROLD NADLER, WHITE

PAPER, LOWER MANHATTAN AIR QUALITY, Last Updated, April 12, 2002, http://www.nyenvirolaw.org/PDF/EPA%20White%20Paper%20Final%204_121.pdf or http://www.911digitalarchive.org/objects/112.pdf]

2/12/02

As you may recall, in the days immediately following September 11th, the City of New York assumed responsibility for indoor environmental quality. . . . Despite the City's best efforts to address indoor environmental issues, it is apparent that many concerns and challenges remain. I am committed to providing additional assistance to the City and its residents and stand ready to do so. In addition, as you suggested yesterday, I will be working with our local, state, and federal partners to establish a Task Force on Indoor Air in Lower Manhattan, so that we can move as quickly as possible to address the remaining concerns we all share.

. . .

[Administrator Whitman to Senator Clinton, letter dated 2/12/02, one day after US Senate hearing on indoor air]

5/28/02

But Mears countered that cleanup efforts are the responsibility of business owners, not the EPA. "According to OSHA standards, worker safety must be provided and financed by employers," she said.

Will Insurance Pay? "Most businesses have insurance to pay for professional cleaning," she added. "Our program is directed towards concerned citizens who may not have the money to ensure that their homes are truly free of contaminants."

. . .

[Poisons from Towers Crash Still Loose in Manhattan, Rep. Nadler Says, Calling EPA a 'Disgrace,' By Kent Vander Wal, 5/28/03, http://www.columbia.edu/cu/libraries/indexes/cq-homeland-sec.html]

REFERENCES

1. Data for Con Ed, NYC Dept. of Env. Protection, OSHA, NY State Department of Environmental Conservation, NY State Dept. of Labor Public Employee Safety and Health Bureau test data was supplied on 11/13/01 from the NYS Dept. of Environmental Conservation to the NY Environmental Law and Justice Project in response to a Freedom of Law request, and is posted at www.NYenviroLAW.org .

2. Data for Con Ed, NYC Dept. of Env. Protection, OSHA, NY State Department of Environmental Conservation, NY State Dept. of Labor Public Employee Safety and Health Bureau test data was supplied on 11/13/01 from the NYS Dept. of Environmental Conservation to the NY Environmental Law and Justice Project in response to a Freedom of Law request, and is posted at www.NYenviroLAW.org .

3. **Gramercy Park, NYC 1989 – Con Edison steam pipe explosion.** Negative air pressure, segregating abatement areas, etc., was strictly followed for large apartment buildings after the explosion of a Con Edison steam pipe in Gramercy Park, NYC in 1989. I have photographs of whole apartment buildings swathed in Tyvek sheeting. The amount of asbestos released in the 1989 Con Ed steam pipe explosion was only 200 pounds. For the World Trade Center, from 400 to 1000 tons of asbestos was released.

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http://www.bumc.bu.edu/SPH/Gallery/preface.html

[See this web site for photo of buildings swathed in Tyvek]

Gramercy Park, New York City , New York Times Friday December 17, 1993, "Con Edison is Indicted in 1989 Cover-up in Asbestos Blast,... Two Ex-officials Indicted."

New York Times Tuesday November 1, 1994, "Con Edison Admits to Conspiracy to Cover-up Asbestos in Blast."

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http://es.epa.gov/oeca/accomplish/appendix/criminal.html

United States v. Con Edison: On August 19, 1989, an explosion of a Con Edison steam pipe in the Gramercy Park area of Manhattan released approximately 200 pounds of asbestos into the air. Many people had to be evacuated from their homes during the ensuing cleanup operation. In 1993, Con Edison and two corporate officers were indicted on various charges including conspiracy to conceal the release of asbestos in violation of CERCLA and EPCRA and Title 18, failure to notify the United States of the release in violation of EPCRA, failure to notify the community emergency coordinator and the state emergency planning commission in violation of EPCRA, and giving false statements and causing others to give falsestatements in violation of Title 18. After commencement of trial in October 1994, Con Edison and Constantine Papakrasas,

an Assistant Vice President in charge of Con Edison's Steam Operations Division, pled guilty. Con Edison pled to four counts, including conspiracy, EPCRA failure-to-notify, and two violations of Title 18. Con Edison was sentenced to three years of probation under the supervision of a court-appointed monitor, and fined $2 million. Due in part to his failing health, Mr. Papakrasas was fined $5,000.

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http://www.bumc.bu.edu/SPH/Gallery/preface.html

Gramercy Park, New York City. New York Times Friday December 17, 1993 "Con Edison is Indicted in 1989 Cover-up in Asbestos Blast,... Two Ex-officials Indicted.

New York Times Tuesday November 1, 1994 "Con Edison Admits to Conspiracy to Cover-up Asbestos in Blast."

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http://www.ucc.org/disaster/d011502.htm

"Some ten years ago in Gramercy Park we had a huge event where a ventilation shaft exploded and sent a cloud of asbestos up all over the area," he said. "When that happened, the city came in, evacuated everyone, sealed off the area, and cleaned it all up. It was declared a public health emergency by the Department of Health."

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http://sdf.lonestar.org/~benaaron/2001_09_01_blogarc.html

One weekend afternoon in 1989, I was home in New York, mucking around. Home was a fifteenth-floor room in a flophouse that was officially classified as a Single-Room Occupancy Hotel. The occupants were old people who were too poor to move, and struggling Gen-Xers like me. My window, which faced south toward Gramercy Park a few blocks away, was open. Abruptly there was an airplane whoosh overhead, a full-bodied grey engine noise that went on for an unnaturally long time, as if a plane were trying to land in Gramercy Park, which is smaller than a football field and enclosed by iron gates to which only residents of the surrounding luxury buildings have keys. And the plane kept landing. For five, ten, fifteen minutes, the plane kept landing.

Emergency sirens everywhere. The plane was still landing. I turned on the all-news radio and they already had the story of what was causing the noise: a steam pipe had burst next to Gramercy Park. Steam is a utility that runs under the streets of New York City. You can see it sometimes wisping out of grates and manhole covers. At this moment there was a scalding geyser in the street a few blocks south of me; I couldn't see it because Baruch College was in the way. All the front rooms in the building next to the geyser were boiled.

It was a nice day and most people had gone out. Only one of the residents died, a woman who had gone into the front room to change her baby (who I suppose died too, but I no longer remember the details). A few Con Ed workers who had been working on the steam pipe died. Two Brat Pack writers who lived in the building lost all their work because their computers were in their front room. The neighborhood was covered in asbestos for a while. Lawsuits were filed. It all seemed like a terribly big deal at the time. . . . posted by Diana 9/18/2001 07:24:30 AM

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http://www.urbanlogic.org/site/hist_tx.htm

On a hot summer day in the middle of August 1989, the asphalt covering an ancient steam pipe in underneath 20th Street at Third Avenue in the Gramercy Park area of Manhattan exploded in a geyser of steam that showered the historic neighborhood with 220 pounds of asbestos wrapping. Several people died in the explosion, the neighborhood was reconfigured as a quarantined war zone and the residents were turned into nomads, separated from their comfortable urban surroundings, possessions and lifestyles.

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http://www.corporatepredators.org/top100.html

Consolidated Edison Company Type of Crime: Environmental Criminal Fine: $2 million Corporate Crime Reporter 46(5), November 28, 1994 Consolidated Edison Company pled guilty to four environmental crime counts in connection with the release of 200 pounds of asbestos after an August 1989 steam manhole explosion in the Gramercy Park section of Manhattan.

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http://college3.nytimes.com/guests/articles/2001/12/26/891318.xml

For a time, Con Ed lurched from one crisis to another: blackouts in 1965 and 1977, with a near-bankruptcy in between; an explosion in 1989 in Gramercy Park that killed several workers and spewed asbestos onto homes; a string of accidents and mishaps at its Indian Point 2 nuclear plant, which was sold in September to the Entergy Corporation (news/quote).

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http://www.isip.msstate.edu/publications/courses/ece_8463/projects/1998_spring/data/lm_training/wsj93_074.text

THE COMPANY DID NOT COOPERATE WITH OUR INVESTIGATION IN ANY MEANINGFUL WAY SAID US ATTORNEY MARY JO WHITE AT A NEWS CONFERENCE ALL THREE DEFENDANTS WERE ALSO CHARGED WITH MAKING FALSE STATEMENTS TO THE FEDERAL GOVERNMENT

4. The NYC DOH told residents that their do-it-yourself cleanup guidelines of 9/17/01 only applied to apartments and offices south of Warren St. and west of Broadway.

5. EPA's comments on draft FEMA report, included as Appendix H in: FEMA's Delivery of Individual Assistance Programs: New York - September 11, 2001, dated: December, 2002, p. 65, http://www.fema.gov/ig/iaprograms.shtm contains a description of these meetings.

6. Documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project responsive to the questions of what EPA told citizens.

7. Documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project responsive to the questions of what EPA told citizens.

8. Documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project. The FOIA requested documentation of advice to citizens on using professional abatement, assumption that dust contained asbestos, and how EPA defined “minimal dust layers” or “significant dust layers.

9. From: News and Views, City Beat, Tuesday, November 20, 2001, NY Daily News, Feds, City Ignore Asbestos Cleanup Rules, Says EPA Vet

A veteran scientist at the federal Environmental Protection Agency is charging that her agency and the city Health Department are ignoring federal asbestos-abatement law in buildings around the World Trade Center disaster site.

In a scathing memo circulated last week within the agency, Cate Jenkins, a 22-year EPA employee, charged that top brass have "effectively waived" the EPA's "strict national regulations for removal and disposal of asbestos contaminated dust" by recommending that residents and commercial building managers in lower Manhattan follow the "extremely lenient (and arguably illegal) asbestos guidelines of the New York City Department of Health."

In her memo, a copy of which was obtained by the Daily News, Jenkins noted that the EPA's testing had identified at least 30 locations, some five to seven blocks from Ground Zero, where asbestos levels in dust samples were above the 1% "action level" cited in the federal

Clean Air Act.

That law requires elaborate and strict procedures for asbestos removal to be followed and the use of trained asbestos cleanup companies.

"We haven't waived any regulations," said Walter Mugdan, the agency's regional counsel, who insisted Jenkins was misreading the law.

"She [Jenkins] assumes that they [the regulations] apply to the cleaning up of dust in residential or office buildings in lower Manhattan. "When they were written, they were never intended to apply to something like a terrorist act. These regulations apply to owners and operators of a facility who are carrying out a demolition or renovation. They were never contemplated to apply to someone cleaning an apartment," Mugdan said.

"This is not an academic or scientific argument," Jenkins said yesterday. "Our regulations are very specific. They don't allow you to do this. We've had a breakdown where the federal EPA and the city are scrambling to get everything back to normal, and they're ignoring the law."

Jenkins, who has a Ph.D. in chemistry and works for the agency's Washington-based Hazardous Waste Identification Division in the Office of Solid Waste, said she believes her colleagues "are afraid to say anything."

“Ludicrous” Advice

Some of the advice the Health Department has posted for people on how to remove dust in their apartments, Jenkins said, is "ludicrous." One example, from the department's Web site: "If curtains need to be taken down, take them down slowly to keep dust from circulating."

"EPA regulations do not allow anyone to oversee and perform . . . asbestos removal, such as a resident in an apartment building or a building owner," Jenkins said. EPA administrator Christie Whitman and other top agency officials have repeatedly stressed that a few dozen of more than 1,300 air monitoring tests the agency has done since Sept. 11 have shown asbestos levels above federal safety levels.

"Of course, individual samples represent only a snapshot at a moment in time, not the environmental conditions that would determine whether federal standards have been exceeded," Whitman wrote in an Oct. 31 Op-Ed piece in The News.

In addition, federal and city officials have stressed that the main danger of cancer or asbestosis comes from long-term exposure to the mineral fibers.

The Health Department did not immediately respond to calls seeking comment. But on its Web site, the department says "some asbestos was found in a few of the dust and debris samples taken from the blast site." Still, the city notes: "Most of the air samples taken have been below levels of concern. ... The risk of developing an asbestos-related illness following an exposure of short durations, even to high levels, is extremely low."

The Danger Indoors

But Jenkins noted that outdoor readings could be lower than asbestos readings indoors, where fibers stay unless they are professionally removed.

At least two independent studies of commercial and residential buildings near Ground Zero appear to support her statement. One of those reports was released yesterday by the Ground Zero Task Force, a coalition of elected officials who represent lower Manhattan. Those tests, conducted Sept. 18 in two residential buildings near Ground Zero by Cincinnati-based Environmental Quality Management, found asbestos levels far exceeding the federal safety limit. The other study, conducted in late September by Virginia-based HP Environmental, found that seven of 11 air samples taken from two office buildings within three blocks of Ground Zero exceeded federal standards.

10. Documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project. The FOIA requested documentation of advice to citizens on using professional abatement, assumption that dust contained asbestos, and how EPA defined “minimal dust layers” or “significant dust layers.

11. Documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project. The FOIA requested documentation of advice to citizens on using professional abatement, assumption that dust contained asbestos, and how EPA defined “minimal dust layers” or “significant dust layers.

12. Documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project. The FOIA requested documentation of advice to citizens on using professional abatement, assumption that dust contained asbestos, and how EPA defined “minimal dust layers” or “significant dust layers.

13. Example of official agency request for documentation from the regulated public:

Dear _____ :

The U.S. Environmental Protection Agency's Office of Solid Waste (EPA/OSW), as directed by Congress in the Hazardous and Solid Waste Act of 1984 (HSWA), is undertaking an investigation of _____ . This investigation is being conducted pursuant to a 1991 settlement agreement between EPA and _____ . The settlement agreement identifies _____ . (See Attachment for _____ .) The purpose of this project is to determine whether, _____
_____
_____

Your facility has been _____ . Under Section 3007 of the Resource Conservation and Recovery Act (RCRA), 42 USC 6927, you are required to provide us access to your facility and provide us with certain waste generation and management information.

EPA is working with an industry workgroup comprised of representatives from the _____ . The workgroup has reviewed and commented on the Agency's information collection and quality assurance plans.

EPA has contracted _____ (EPA Contract No. _____) to assist in the characterization and evaluation of _____ . _____ will contact your facility in the near future to collect facility-specific information and schedule the site visit. If you have any questions or need additional information please call _____

14. Arts, Crafts, and Theater Safety, 181 Thompson St., Suite 23, New York City, NY 10012, 212/777-0062, actsnyc@cs.com .

15. US EPA (1990) Common Questions on the Asbestos NESHAP. EPA Publication No. 340/1-90-021. Available online at: http://www.epa.gov/ncepihom/nepishom/

40 CFR § 61. The Code of Federal Regulations are available from most larger libraries, all law libraries, and also online at: http://www.access.gpo.gov/nara/cfr/index.html, or for EPA-only CFR citations (faster) at http://www.epa.gov/epahome/cfr40.htm

16. US EPA (1992) Guidelines for Catastrophic Emergency Situations involving Asbestos, EPA Publication No. EPA 340/I-92-010. Available at: http://www.epa.gov/nepis/

17. Callahan's 11/26/01 testimony was included in documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project. The FOIA requested documentation of advice to citizens on using professional abatement, assumption that dust contained asbestos, and how EPA defined "minimal dust layers" or "significant dust layers.

18. Documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project. The FOIA requested documentation of advice to citizens on using professional abatement, assumption that dust contained asbestos, and how EPA defined "minimal dust layers" or "significant dust layers.

19. Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, http://epa.gov/wtc/confirmation_clean_study.htm

20. The EPA 110 Liberty St. study states "The regulatory clearance criterion for TEM AHERA was 70 S/cm2, converted to 0.022 S/cc, based on a volume of 1200 cc. The regulatory criterion for PCM AHERA was 0.01 f/cc based on a volume of 1200 cc." Under AHERA, the PCM light microscope test may be performed instead of the AHERA TEM test. However, if the PCM test fails, then the

tester is required to follow up with the AHERA TEM test to confirm, or start the abatement process over.

21. Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, http://epa.gov/wtc/confirmation_clean_study.htm

22. Chatfield, E. J., and Kominsky, J. R. (October 12, 2001) Summary Report: Characterization of particulate found in apartments after destruction of the World Trade Center. Requested by: "ground Zero" Elected Officials Task Force. Chatfield Technical Consulting, Mississauga, Ontario, Canada and Environmental Quality Management, Inc., Cincinnati, OH. Posted at www.nycosh.org/linktopics/WTC-catastrophe.html

23. Mugdan, Walter (December 19, 2001) Regional Asbestos Coordinators and National Asbestos Coordinators Meeting for December, Conference call.

24. Chatfield, E. J., and Kominsky, J. R., op. cit.

25. Chatfield, E. J., and Kominsky, J. R. (October 12, 2001) Summary Report: Characterization of particulate found in apartments after destruction of the World Trade Center. Requested by: "ground Zero" Elected Officials Task Force. Chatfield Technical Consulting, Mississauga, Ontario, Canada and Environmental Quality Management, Inc., Cincinnati, OH. Posted at http://www.nycosh.org/linktopics/WTC-catastrophe.html.

26. Documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project responsive to the questions of what EPA told citizens.

27. See stories at:

City Limits MONTHLY, Date: November 2000, GROWING IN
https://secure12.cfxhosting.com/citylimitsorg/content/articles/articleView.cfm?articlenumber=368

Revitalizing Urban Brownfields, Good Buys for Troubled Neighborhoods, by Jane Salodof MacNeil, http://www.imakenews.com/clfventures/e_article000131068.cfm

28. WTC Report, Chapter 6, Bankers Trust Building *[Deutsche Bank Building]*, nerdcities.com/guardian/WTC/WTC_ch6.htm . Web page also currently cached at the following URL. Highlight and copy the following line for the link:

http://216.239.39.100/search?q=cache:JMZozsXYtdsJ:nerdcities.com/guardian/WTC/WTC_ch6.htm+%22deutsche+bank+building%22+%2B+asbestos&hl=en&ie=UTF-8

29. France, D. (10/5/01) Is Ground Zero safe? Newsday, MSNBC.

30. NY officials underestimate danger, by Andrew Schneider, Published in the A-section of the St. Louis Post-Dispatch on Sunday, January 13, 2002. *Updated by the St. Louis Dispatch on its*

anniversary date, 1/13/03, under a new title, "World trade center attack asbestos health threat" and can be found at www.stltoday.com .

31. Susan Q. Stranahan (January/February 2003) Air of Uncertainty C overage of potential health problems near Ground Zero was slow to develop, as many news organizations simply accepted the reassurances of the EPA. The episode underscores the difficulty of covering questions with no clear answers. *American Journalism Review.*

http://216.167.28.193/article_printable.asp?id=2746 .

AJR is published by the Philip Merrill College of Journalism, University of Maryland at: http://www.journalism.umd.edu .

32. Arts, Crafts, and Theater Safety, 181 Thompson St., Suite 23, New York, NY 10012, 212/777-0062, ACTSNYC@cs.com, www.caseweb.com/ACTS .

33. http://www.911digitalarchive.org/objects/110.pdf

34. Granger, R. H., McKee, T. R., Millette, J. R., Chmielinski, P., and Pineda, G. (October 2, 2001) Preliminary Health Hazard Assessment: World Trade Center, HP Environmental, Inc., 104 Elden St., Herndon, VA 20170. Submitted for publication.

35. For a copy of Callahan's 11/26/01 testimony, see page 26 of the PDF file, the documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project responsive to the questions of what EPA told citizens.

36. Personal communication, also see: EPA Is Doubted on Testing at Attack Site by Queena Kim, 9/23/01, Wall Street Journal; and Fallout. The Environmental Consequences of the World Trade Center Collapse. by Juan Gonzalez. Published by The New York Press, NY, 2002, page 109.

37. See press release file of Representative Nadler on 9/15/01 and 9/21/01 at www.house.gov/nadler .

38. Keith Mulvihill (3/17/03, 05:29 PM ET) An internal agency report is criticizing the U.S. Environmental Protection Agency (EPA) for calling the air at Ground Zero "safe to breathe" during the days immediately following the attack on the World Trade Center. Reuters Health, New York City.

Chris Bowman and Edie Lau (3/16/03) 9/11 air assurances disputed. A draft report says EPA erred in saying breathing at Ground Zero was safe. Sacramento Bee

Anonymous (4/15/03) EPA DEFENDS WTC SITE 'SAFE' CLAIM FROM INSPECTOR GENERAL CRITICISM. Risk Policy Report, one of group of publications at www.insideepa.com .

39. The following are press stories of interest:

12/19/02

Halliburton Co., the industrial giant once led by Vice President Dick Cheney, agreed yesterday to pay about $4 billion in cash and stock to settle hundreds of thousands of asbestos claims.

. . .

"This settlement is the kind of model that other companies and asbestos attorneys should be looking at to resolve company liability in the future," said Perry Weitz, the lead negotiator for the plaintiffs. "The settlement shows that companies can quantify their asbestos exposure and conduct business without a cloud of asbestos liability to provide compensation sooner than later."

. . .

[Halliburton to pay $4 billion to settle asbestos claims, By CHARLES SHEEHAN, Seattle Post-Intelligencer, 12/19/02, http://seattlepi.nwsource.com/business/100562_halliburton.shtml]

12/11/01

Halliburton's insistence that the asbestos claims would not have a significant financial impact on the company failed to mollify analysts.

"I feel sympathy for [the] management and I wish them luck," said Banc of America's Jim Wicklund. "The problem is, in spite of everything they said... there is still a great deal of uncertainty about the ultimate magnitude of their liability."

Deutsche Bank Alex Brown analyst Arvind Sanger agreed. "Even if they win five different lawsuits, nobody will pay much attention," he said. "But if they lose one, everybody will sit up and take notice." The credit rating agency Standard & Poor's slashed Halliburton's debt rating on Tuesday due to its asbestos risk.

. . .

[Investors fear rising asbestos claims, 12/11/01, BBC News, http://news.bbc.co.uk/1/hi/business/1703518.stm]

12/19/02

Pittsburgh -- Halliburton Co. agreed Wednesday to pay about $4 billion in cash and stock to settle hundreds of thousands of asbestos claims. The deal would cover about 300,000 current and future asbestos cases, mostly involving people across the country who were exposed to asbestos while working at plants that produced the material or in places where asbestos was used, such as steel mills. Most of the claims against Halliburton were inherited four years ago when the Houston based company -- a huge oil field services, engineering and construction business -- acquired Dresser Industries Inc. for $7.7 billion. At that time, the company was headed by Vice President Dick Cheney.

. . .

In the second quarter of this year, Halliburton said it lost $498 million -- its first loss in four years -- as it took charges against earnings, in part for asbestos-related claims. Halliburton stock

closed down 80 cents a share to $19.55 Wednesday. Asbestos suits have forced more than 60 companies, including W.R. Grace & Co. and Owens Corning, into bankruptcy since 1982, as former workers seek compensation for health problems linked to the potentially cancer-causing building material. Experts say the Halliburton settlement may provide a blueprint for other companies striving to wipe out their asbestos liability.

. . .

[Halliburton to fork out $4 billion for asbestos, ASSOCIATED PRESS, The Atlanta Journal-Constitution: 12/19/02]

5/22/02

During Vice President Dick Cheney's tenure as its chief executive, the Halliburton Corporation altered its accounting policies so it could report as revenue more than $100 million in disputed costs on big construction projects, public filings by the company show. Halliburton did not disclose the change to investors for over a year.

At the time of the change which was approved by Arthur Andersen, the com pany's auditor at the time Halliburton was suffering big losses on some of its long-term contracts, according to the filings. Its stock had slumped because of a recession in the oil industry. Two former executives of Dresser Industries, which merged with Halliburton in 1998, said that they concluded after the merger that Halliburton had instituted aggressive accounting practices to obscure its losses. Much of Halliburton's business comes from big construction projects, like natural gas processing plants, which sometimes run over budget. With the policy change, Halliburton began to book revenue on the assumption that its customers would pay at least part of the cost overruns, although they remained in dispute. Before 1998, the company had been more conservative, reporting revenue from overruns only after settling with its customers.

. . .

[Under Cheney, Halliburton Altered Policy on Accounting By ALEX BERENSON and LOWELL BERGMAN, 5/22/02, NY Times]

6/27/03

The Senate Judiciary Committee on Thursday moved another major roadblock to a legislative settlement of all pending and future asbestos injury claims, voting to require industry to pay as much as $135 billion over 27 years.

. . .

Utah Sen. Orrin Hatch, the committee's Republican chairman, implored his colleagues to reach consensus on a "no-fault" system, pointing to 67 companies already in bankruptcy protection because of a flood of asbestos injury claims.

. . .

Sen. Richard Durbin, D-Ill., said the legislation amounted to "a windfall" for corporate defendants such as the Halliburton Corp., citing an analysis that concluded its asbestos liabilities would shrink from more than $4 billion to $420 million. He said a number of defendant companies' share prices have moved sharply higher as the committee has progressed toward a deal.

. . .

[Asbestos victims get relief in Senate Judiciary vote, Greg Gordon, 06/27/03, Minneapolis Star Tribune, http://www.startribune.com/stories/587/3959164.html]

40. Headquarters Press Release, Washington, DC, For Release 05/20/2003, EPA KICKS OFF PUBLIC AWARENESS CAMPAIGN FOR VERMICULITE ATTIC INSULATION WHICH MAY CONTAIN ASBESTOS, http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/9a2bad338cf01a0a85256d2d005af6b5?OpenDocument

41. Headquarters Press Release, Washington, DC, For Release 05/21/2003, Whitman Proud of Accomplishments as She Prepares to Return Home to New Jersey Resigns as Administrator of EPA, Effective, June 27, 2003, http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/d4ff1eb843da7ea085256d2d005ef686?OpenDocument

42. There is a typo in the 1/27/03 IG report. The units for the AHERA test should have been structures per square millimeter (s/mm^2), not structures per cubic centimeter or structures per milliliter. The AHERA test uses an entirely different unit, the number of structures collected on a given area of a filter. Other tests and standards use concentration in a given volume of air, which has the units s/cc or s/mL.

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44. For a copy of Callahan's 11/26/01 testimony, see page 26 of the PDF file, the documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project responsive to the questions of what EPA told citizens.

45. Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, p. 4, footnote, http://epa.gov/wtc/confirmation_clean_study.htm

> The regulatory clearance criterion for TEM AHERA was 70 S/cm^2, converted to 0.022 S/cc, based on a volume of 1200 cc.

46. See my 3/11/02 memorandum for a good compendium of the language of these statutes and regulations pointing to background levels as the cleanup goal.

47. ATSDR (2000) Section 5.4 Levels Monitored or Estimated in the Environment. Toxicological Profile for Asbestos, Agency for Toxic Substances and Disease Registry, Centers for Disease Control, ATSDR. Available by calling 1-888-42-ATSDR. Currently, only the final draft version is posted at www.atsdr.cdc.gov/toxprofiles/tp61.html]

48.The AHERA TEM level of 70 structures per square millimeter is the same as 0.02 structures per milliliter. This translates to about 0.01 PCM-equivalent fibers per milliliter. For a lifetime exposure, this would result in an excess cancer risk of over 2 per 1000. See EPA's Integrated Risk Information System for asbestos at http://www.epa.gov/iris/subst/0371.htm .

Even the NYC Department of Environmental Protection testified that this would be safe for only short periods of time. The following is a quote from Frieden, NYC Commissioner:

> Health professionals have stated that short-term exposure to airborne asbestos, at levels equal to or lower than 0.01 [*fibers per milliliter, PCM equivalent*], carries an extremely low risk of causing asbestos-related illness.
>
> [Frieden, T. R., and Miele, J. A. (February 11, 2002) Testimony before the U. S. Senate Committee on Environment and Public Works Subcommittee on Clean Air, Wetlands, and Climate Change. Alexander Hamilton U. S. Customs House, New York City. Thomas R. Frieden, Commissioner, New York City Department of Health, Joel A. Miele Sr., Commissioner, New York City Department of Environmental Protection]

See discussions and chart of different air asbestos levels with associated risks in the following memorandum:

> Jenkins, C. (March 11, 2002) Status of air and dust asbestos testing after WTC collapse: 1. Misrepresented "safe levels" and standards for asbestos; 2. Failure to test at low levels related to safety; 3. Region 2 relied on more sensitive TEM tests for settled dusts in own building, required by EPA policy, did not provide same sensitive testing for rest of NYC, and refused Region 8 offer of free sensitive testing for rest of NYC. Cate Jenkins, Hazardous Waste Identification Division, OSW, EPA, memorandum addressed to affected parties and responsible officials. Posted at www.NYenviroLAW.org

49. The EPA Region 2 background study also apparently intentionally ignored a key study on typical background concentrations of settled dusts in the interiors of buildings. It only cited a study by Ewing. EPA claimed they did an exhaustive literature search and only found this one study by Ewing. Any simple computer literature search would have uncovered the Millette and Hays study: Millette, J. R., and Hays, S. M. (1994) Chapter 6. Data: Levels of asbestos in dust, pages 49-50. In: *Settled Dust Sampling and Analysis*, Lewis Publishers, CRC Press.

In addition, EPA would have know about the Millette and Hays study of settled dusts, because I included this study in my 6/9/02 memorandum, which was sent to EPA Region 2 key personnel working on the WTC cleanup, including the person who approved the EPA background study. My 6/9/02 memorandum contained the following table summarizing typical indoor dust levels of asbestos from this study.

TYPICAL ASBESTOS DUST LEVELS INSIDE BUILDINGS Levels of asbestos found from testing of a large number of interiors with or without asbestos building materials and/or asbestos contamination problems

	structures per square centimeter (s/cm^2)
"BACKGROUND" If " background" is defined as the level in a building where there are no asbestos containing building materials, then background should be considered to be at or below 200 s/cm^2. Testing of three government buildings in Maryland with no asbestos containing materials showed levels below 200 s/cm^2.	less than 200
A western state building with no asbestos containing materials had even lower levels, an average mean concentration of 160 s/cm^2.	less than 160
"RECENTLY CLEANED HARD SURFACES" Buil dings with asbestos containing materials where hard surfaces had been recently cleaned.	86 to 320
"LOW" Av erage of a wide range of measurement (6.5 to over 4.3 million s/cm^2) for buildings with asbestos containing materials. This level was described as "low," but not "background." See the earlier entry in this table for levels inside buildings where no asbestos containing materials are used. If "background" is defined as the levels found in buildings not containing asbestos materials, then the "low" level of 1000 s/cm^2 is high in comparison.	1000
"ABOVE BACKGROUND" Levels that are considered to be definitively above background	10,000
"HIGH" Lev els considered high and "in the range of a significant accidental release from an abatement site"	100,000

50. US EPA (2003) FINAL DRAFT PILOT STUDY TO ESTIMATE ASBESTOS EXPOSURE from VERMICULITE ATTIC INSULATION, Research Conducted in 2001 and 2002, Prepared for: Fibers and Organics Branch National Program Chemicals Division Office of Pollution Prevention and Toxics, U.S. Environmental Protection, Agency Ariel Rios Building 1200 Pennsylvania Avenue, N.W. Washington, D.C. 20460, Prepared by: Versar, Inc. 6850 Versar Center Springfield, VA 22151, May 21, 2003.

For web page to access all figures and tables in the report:
http://www.epa.gov/opptintr/asbestos/insulationreport.pdf

51. See Table 6 of the EPA vermiculite attic study.

52. Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, p. 4, footnote, http://epa.gov/wtc/confirmation_clean_study.htm

The regulatory clearance criterion for TEM AHERA was 70 S/cm^2, converted to 0.022 S/cc, based on a volume of 1200 cc.

53. See Table 7.

54.Kominsky, J. R., and Freyberg, R. W. (1993) Asbestos Fiber Reentrainment During Dry Vacuuming and Wet Cleaning of Asbestos-Contaminated Carpet, EPA Risk Reduction Engineering Laboratory, EPA Publication No. EPA/600/S2-91-004, posted at http://www.epa.gov/nepis/

> A study was conducted to evaluate the potential for asbestos fiber reentrainment during cleaning of carpet contaminated with asbestos. Two types of carpet cleaning equipment were evaluated at two carpet contamination levels. Airborne asbestos concentrations were determined before and during carpet cleaning to evaluate the effect of the cleaning method and contamination loading on fiber reentrainment during carpet cleaning. Overall, airborne asbestos concentrations during carpet cleaning were two to four times greater than concentrations prior to cleaning. The level of asbestos contamination and the type of cleaning method used had no statistically significant effect on the relative increase of airborne asbestos concentrations during carpet cleaning.
>
> . . .
>
> 1) to evaluate the effectiveness of a high-efficiency particulate air (HEPA) filtered vacuum cleaner and a HEPA-filtered hot-water extraction cleaner ...

Kominsky, J. R., et al. (1991) Evaluation of Two Cleaning Methods for Removal of Asbestos Fibers from Carpet, US EPA Risk Reduction Engineering Laboratory, Cincinnati, OH 45268, EPA Publication No. EPA/600/S2-90/053, posted athttp://www.epa.gov/nepis/

This study was for artificially asbestos contaminated carpet

> The effectiveness of dry-vacuuming and wet-cleaning for the removal of asbestos fibers from carpet was examined, and the potential for fiber reentrainment during carpet cleaning activities was evaluated. Routine carpet cleaning operations were simulated by using high-efficiency particulate air (HEPA) filtered dry vacuum cleaners and HEPA-filtered hot-water extraction cleaners on carpet artificially contaminated with asbestos fibers. Overall, wet-cleaning with a hot water extraction cleaner reduced the level of asbestos contamination in the carpet by approximately 70%. There was no significant change in carpet asbestos concentration after dry-vacuuming. The level of asbestos contamination had no significant effect on the difference between the asbestos concentrations before and after cleaning. Airborne asbestos concentrations were two to four times greater during than before the carpet cleaning activities. Neither the level of asbestos contamination in the carpet nor the type of cleaning method used greatly affected the difference between the airbone asbestos concentration before and during cleaning. *[emphasis added]*

Kominsky, J. R., et al. (1993) Evaluation of Three Cleaning Methods for Removing Asbestos from Carpet: Determination of Airborne Asbestos Concentrations Associated with Each Method, US EPA Risk Reduction Engineering Laboratory, Cincinnati, OH 45268, EPA Publication No. EPA/600/SR-93/155, Posted at http://www.epa.gov/nepis/

This study was for real-world asbestos contaminated carpet:

> A study was conducted to compare the effectiveness of three cleaning methods for removal

of asbestos from contaminated carpet and to determine the airborne asbestos concentrations associated with each. Baseline measurements before cleaning showed an average concentration of 1.6 billion asbestos structures per square foot (s/ft^2) of carpet. The effectiveness of dry vacuuming using cleaners with and without a high-efficiency particulate air filter was compared with that of wet cleaning with a hot-water extraction cleaner. The wet cleaning method reduced the level of asbestos contamination in the carpet by approximately 60%, whereas neither dry cleaning method had any notable effect on the asbestos level. The type of cleaner used had little effect on the difference between the airborne asbestos concentration before and during cleaning.

For comparison, see the air levels found for vacuuming with a regular, non-HEPA vacuum in the following study: Millette, J. R., and Hays, S. M. (1994), Chapter 8, Resuspension of Settled Dust, in: *Settled Dust Sampling and Analysis*, page 63, Table 2, Lewis Publishers, ISBN 0-87371-948-4.

55. EPA current policy is that only asbestos fibers at least 5 µg long present a cancer risk. Although the scientific community does not necessarily agree with this position, if PLM light microscope methods are used on WTC dust, a great majority of the thinner asbestos fibers, but still longer than 5 µg, cannot be detected.

56. Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, Muszynskihttp://epa.gov/wtc/confirmation_clean_study.htm

57. Joel Kupferman (April, 2002) New York Environmental Law and Justice Project, 315 Broadway, Suite 200, New York, NY 10007, www.NYenviroLAW.org . Personal communication.

58. Joel Kupferman (April, 2002) New York Environmental Law and Justice Project, 315 Broadway, Suite 200, New York, NY 10007, www.NYenviroLAW.org . Personal communication.

59. B. Cliff (April 18, 2002) tenant at 200 Rector St. Personal communication.

Dr. Kate Bernstein (April 23, 2002) tenant in Apt. 33F, 200 Rector Place. Personal communication.

60. Stratus Corporation (October 5, 2001) Asbestos Emergency Monitoring Report at: 290 Broadway after the World Trade Center Disaster. Stratus Corporation, 17 North St., Tarrytown, NY 10591, under contract to the General Services Administration.

61. See EPA Region 8 website for Libby, MT at http://www.epa.gov/region8/superfund/libby/index.html

62. Chatfield, E. J., and Kominsky, J. R. (October 12, 2001) Summary Report: Characterization of particulate found in apartments after destruction of the World Trade Center. Requested by:

"ground Zero" Elected Officials Task Force. Chatfield Technical Consulting, Mississauga, Ontario, Canada and Environmental Quality Management, Inc., Cincinnati, OH. Posted at http://www.nycosh.org/linktopics/WTC-catastrophe.html.

63. Millette, J.R.; Clark, P.J.; Brackett, K.A.; Wheeles, R.K. (1993) Methods for the analysis of carpet samples for asbestos. Environmental Protection Agency, Cincinnati, OH (United States). Risk Reduction Engineering Lab. (6 pages) NTIS Report Number: PB-93-194355/XAB , EPA Publication Number EPA--600/J-93/167. Available from the National Technical Information Service (NTIS) online for no charge at www.NTIS.gov

Millette, J. R., *et al.* (1994) Appendix 4, Methods for the Analysis of Carpet Samples for Asbestos. In: *Settled Asbestos Dust. Sampling and Analysis*, Lewis Publishers, CRC Press.

64. Millette, J.R.; Clark, P.J.; Brackett, K.A.; Wheeles, R.K. (1993)*, op. cit.*

Millette, J. R., *et al.* (1994)*, op. cit.*

65. Millette, J. R. (June 4, 2002) Personal communication. MVA Inc., Norcross, GA. http://www.mvainc.com

Granger, R. H., McKee, T. R., Millette, J. R., Chmielinski, P., and Pineda, G. (October 2, 2001) Preliminary Health Hazard Assessment: World Trade Center, HP Environmental, Inc., 104 Elden St., Herndon, VA 20170. Paper submitted to the American Industrial Hygiene Association. See Figures 7 and 8 for the fiber widths of asbestos from the WTC. Posted at www.NYenviroLAW.org .

Dr. Millette was EPA's principal investigator in developing EPA's carpet ultrasonication method. In an email he stated the following:

> This is an old claim [that the ultrasonication breaks down bundles of asbestos fibers into individual fibers, thus resulting in a higher count] developed by experts in litigation to try and discredit the dust method. There are ultrasonic instruments that range in power from those that are used to break up kidney stones to those that allow a mother to see her baby in the womb. The ultrasonic bath used in the carpet procedure is a mild mixing type that you can put your hand in. Because of the nature of the material (carpet) you cannot analyze it directly. You must put the particles into suspension and mix them to get a good subsample for filtration and analysis. The ultrasonic mixing was adapted from the EPA water methods that were developed the 1970s. It represents the best technically feasible way to analyze the sample of dust/dirt presented. ... The EPA carpet sonication method is the best technique available to assess carpet contamination.

The study by Granger, *et al.*, HP Environmental, found that asbestos fibers in WTC fallout were already finely divided to such an extent by the explosion that no further separation of the fibers occurred with the use of ultrasonication.

In addition, ultrasonication is also used in other established asbestos methods, such as EPA's indirect preparation method of air samples, as well as the ASTM microvacuum method 5755. Thus, nothing unusual in the carpet sonication procedure.

66. Millette, J. R., *et al.* (1994)*, op. cit.*

67. Kupferman, Joel (June 4, 2002) Personal communication. New York Environmental Law and Justice Project, 315 Broadway Suite #200, New York, New York 10007-1121, www.NYenviroLAW.org

68. Kominsky, J. R., et al. (1993) Evaluation of Three Cleaning Methods for Removing Asbestos from Carpet: Determination of Airborne Asbestos Concentrations Associated with Each Method, US EPA Risk Reduction Engineering Laboratory, Cincinnati, OH 45268, EPA Publication No. EPA/600/SR-93/155, Posted at www.epa.gov/ncepihom/nepishom/

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Kominsky, J. R., et al. (1991) Evaluation of Two Cleaning Methods for Removal of Asbestos Fibers from Carpet, US EPA Risk Reduction Engineering Laboratory, Cincinnati, OH 45268, EPA Publication No. EPA/600/S2-90/053, posted at www.epa.gov/ncepihom/nepishom/

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69. U.S. Army Corps of Engineers (1992) Asbestos Abatement Guideline Detail Sheets, Engineer Pamphlet 1110-1-11. Posted on the internet at http://www.usace.army.mil/inet/usace-docs/eng-pamphlets/ep1110-1-11/entire.pdf

See page 11 of the Corps of Engineer's publication for a table which states that removal is the only option for carpet, and pages 48 and 49 for the procedures for removal. These guidelines are for carpet that is only contaminated with low levels of asbestos, as well as carpet defined as "asbestos containing" having over 1% asbestos. The carpet must be HEPA vacuumed before disposal. This is not to make it free of asbestos, or decontaminated, but instead just to reduce the levels. The carpet must still be removed and replace.

70. US Geological Survey, Environmental Studies of the World Trade Center area after the September 11, 2001 attack, Open File Report OFR-01-0429 Version 1.1, http://pubs.usgs.gov/of/2001/ofr-01-0429/

71. Lioy, P. J., et al. (2002) Characterization of the Dust/Smoke Aerosol that Settled East of the World Trade Center (WTC) in Lower Manhattan after the Collapse of the WTC 11 September 2001, Env. Health Persp., 110(7): 703.

72. Lioy, P. J., et al. (2002) Characterization of the Dust/Smoke Aerosol that Settled East of the World Trade Center (WTC) in Lower Manhattan after the Collapse of the WTC 11 September 2001, Env. Health Persp., 110(7): 703.

73. Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, http://epa.gov/wtc/confirmation_clean_study.htm

74. CDC (September 6, 2002) Self-Reported Increase in Asthma Severity After the September 11 Attacks on the World Trade Center --- Manhattan, New York, 2001, MMWR, 51(35);781-784, http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5135a1.htm

75. World Trade Center Indoor Air Assessment: Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks, Prepared by the Contaminants of Potential Concern (COPC) Committee of the World Trade Center Indoor Air Taskforce Working Group, Peer Review Draft (September, 2002), http://www.tera.org/peer/wtc/Documents.htm

76. Apartment 5C in EPA's Interim Final WTC Residential Confirmation Cleaning Study, 110 Liberty St, New York, NY, 5/03, EPA Region 2, http://epa.gov/wtc/confirmation_clean_study.htm

77. World Trade Center (WTC) October 21-22, 2002 Peer Review Meeting Notes, 2/7/03, Prepared by: Toxicology Excellence for Risk Assessment, http://www.tera.org/peer/wtc/

78. World Trade Center (WTC) October 21-22, 2002 Peer Review Meeting Notes, 2/7/03, Prepared by: Toxicology Excellence for Risk Assessment, http://www.tera.org/peer/wtc/

79. Granger, R. H., McKee, T. R., Millette, J. R., Chmielinski, P., and Pineda, G. (October 2, 2001) Preliminary Health Hazard Assessment: World Trade Center, HP Environmental, Inc., 104 Elden St., Herndon, VA 20170.

80. Documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project responsive to the questions of what EPA told citizens.

81. EPA (1997 - most recent update) Asbestos; CASRN 1332-21-4, http://www.epa.gov/iris/subst/0371.htm

82. Overload can occur when a constant infusion of dust such as short fibers results in a compromised state of clearance *via* the normal routes back up the airways (Castranova, *et al.*, 2000). The lymphatic system offers one route by which this excessive burden of inhaled material can be eliminated from the lung (Lauweryns and Baert, 1977) and serves as a conduit to other parts of the body including the serous membranes which line the body cavities, where mesotheliomas develop (Courtice and Simmons, 1954).

References:

Castranova V, Driscoll K, Harkema J, Jarabek A, Morgan D, Nauss K, Olin S, Vallyathan VVV, Warheit D, Costa D. 2000. The Relevance of the rat lung response to particle overload for human risk assessment: a workshop consensus report. Inhal Toxicol 12:1-17.

Courtice FC, Simmons WJ. 1954. Physiological Significance of Lymph Drainage of the Serous Cavities and Lungs. Physiol Rev 34:419-48.

Lauweryns JM, Baert JH. 1977. Alveolar clearance and the role of the pulmonary lymphatics. Am Rev Respir Dis 115:625-83.

83. Documents supplied by EPA in response to a 1/3/02 Freedom of Information Act (FOIA) request from the New York Law and Environmental Justice Project. The FOIA requested documentation of advice to citizens on using professional abatement, assumption that dust contained asbestos, and how EPA defined “minimal dust layers” or “significant dust layers.

APPENDIX 1 -- Chart/Plot of asbestos concentrations in bulk dust by distance and direction from Ground Zero

Data in chart is presented relative to distance and direction from Ground Zero (GZ). GC is represented by a solid bar in the middle of the chart. Lines above the GZ line are north of GZ. Lines below GZ are points south of GZ. Distance and direction from GZ are approximate, and estimated from the perimeter, rather than the center of GZ. Analyses of bulk dust streets was by light microscopes (PLM) rather than electron microscopes (TEM), and thus underestimates amount of asbestos present. Data is from street dust samples taken 9/11/01 to 9/26/01.

Date (9/11 to 9/26/01)	Location (all outdoor samples)	Blocks from GZ	Direction from GZ (approx.)			Bulk asbestos concentration (by PLM light microscope)	Data Sources*
9/11	West St. and Watt St., debris on floor near command post (Watt St. also called Watts St. This is 2 blocks south of Canal's high point on west side, but much further north than most of Canal)	16	NW			0.50%	Con Edison
9/11	West St. and Watt, debris on vehicle	16	NW			0.50%	Con Edison
9/11	West St. and Watt, debris on vehicle	16	NW			0.50%	Con Edison
9/11	West St. and Watt, debris on vehicle	16	NW			1.30%	Con Edison
9/16-9/17	Market St.	16			NE	3%	Lioy, et al.
9/16-9/17	Cherry St.	11			NE	0.80%	Lioy, et al.
9/11	Pier 25 barge	9		N		none detected	OSHA
9/15	Church & Duane	7			NE	less than 1%	USEPA
9/11	Reade & Hudson	6		N		less than 1%	USEPA
9/19	400 Chamber Courtyard	5	NW			1.4%	USEPA
9/15	Chambers & North End	5	NW			1.3%	USEPA
9/21	4 Blocks north of WTC Bldg. 7	5		N		ND	HP Environ.
9/19	Stuyvesant High School	5		N		2.1%	USEPA
9/19	Stuyvesant HS East	5		N		1.4%	USEPA
9/19	Stuyvesant HS East Stair	5		N		1.5%	USEPA
9/15	Chambers & West Broadway	5		N		below detection limit	USEPA
9/19	455 North End Ave.	4	NW			1.8%	USEPA
9/17	Warren & North End	4	NW			less than 1%	USEPA
9/17	Warren & North End	4	NW			less than 1%	USEPA
9/15	Warren & North End	4	NW			less than 1%	USEPA
9/15	Warren & North End	4	NW			less than 1%	USEPA
9/19	22 River Terrace	4	NW			1.6%	USEPA
9/21	4 Blocks NW of WTC Bldg. 7	4		N		0.75%	HP Environ.
9/18	Church St., South of Duane, roof of automobile	4		N		0.688% (0.018 amphibole, 0.67 chrysotile)	Ground Zero Task Force
9/18	45 Warren St., roof	4		N		1.071% (0.021 amphibole, 1.05 chrysotile)	Ground Zero Task Force
9/15	Warren & Greenwich	4		N		1.2%	USEPA
9/11	Warren & Greenwich	4		N		less than 1%	USEPA
9/11	Warren & West Broadway	4		N		below detection limit	USEPA
9/21	4 Blocks NE of WTC Bldg. 7	4			NE	<0.25%	HP Environ.

9/15	Church & Warren	**4**			**NE**	less than 1%	USEPA
9/12	Church & Warren	**4**			**NE**	less than 1%	USEPA
9/12	Church & Warren	**4**			**NE**	less than 1%	USEPA
9/21	2 Blocks NE of WTC Bldg. 7	**3**		**N**		0.75%	HP Environ.
9/21	2 Blocks north of WTC Bldg. 7	**3**		**N**		ND	HP Environ.
9/21	2 Blocks NW of WTC Bldg. 7	**3**		**N**		0.75%	HP Environ.
9/17	Murray & Greenwich	**3**		**N**		less than 1%	USEPA
9/15	42 Murray St.	**3**		**N**		1.4%	USEPA
9/15	Murray & Broadway	**3**			**NE**	1.2%	USEPA
9/14	Maiden & Broadway	**3**			**NE**	less than 1%	USEPA
9/12	Church & Murray	**3**			**NE**	less than 1%	USEPA
9/12	Church & Murray	**3**			**NE**	less than 1%	USEPA
9/11	Greenwich, btw Murray & Park Pl.	**2**		**N**		0.25%	Con Edison
9/18	Murray & West	**2**	**NW**			1.7%	USEPA
9/16	Murray & West	**2**	**NW**			2%	USEPA
9/15	Murray & West	**2**	**NW**			1.3%	USEPA
9/12	Murray & West	**2**	**NW**			below detection limit	USEPA
9/12	Murray & West	**2**	**NW**			less than 1%	USEPA
9/11	Murray & West	**2**	**NW**			4.49%	USEPA
9/11	Murray & West	**2**	**NW**			less than 1%	USEPA
9/11	S/E/C West and Murry	**2**	**NW**			0.75%	Con Edison
9/17	100 Church St.	**2**			**NE**	less than 1%	USEPA
9/17	100 Church St.	**2**			**NE**	less than 1%	USEPA
9/15	27 Park Pl.	**2**			**NE**	less than 1%	USEPA
9/21	4 Blocks west of WTC Bldg. 7	**1**	**NW**			0.50%	HP Environ.
9/11	West St. S/O Vesey	**1**	**NW**			1.50%	Con Edison
9/21	2 Blocks east of WTC Bldg. 7	**1**		**N**		ND	HP Environ.
9/21	WTC Bldg. 7 Center	**1**		**N**		ND	HP Environ.
9/21	2 Blocks west of WTC Bldg. 7	**1**		**N**		ND	HP Environ.
9/19	Barclay & Church	**1**		**N**		below detection limit	USEPA
9/18	Park Place & West Broadway	**1**		**N**		1.9%	USEPA
9/17	Barclay & West Broadway	**1**		**N**		less than 1%	USEPA
9/16	Park Place & West Broadway	**1**		**N**		2%	USEPA
9/15	Barclay & West Broadway	**1**		**N**		1.4%	USEPA
9/15	Park Place & West Broadway	**1**		**N**		less than 1%	USEPA
9/12	Park Place & West Broadway	**1**		**N**		less than 1%	USEPA
9/12	Park Place & West Broadway	**1**		**N**		less than 1%	USEPA
9/26	on plaza, from Church St.	**1**		**N**		5%	NYS DOL
9/11	Church & Barclay	**1**		**N**		below detection limit	Con Edison
9/11	West Bdwy & Barclay	**1**		**N**		trace	Con Edison
9/11	Barclay & Washington St.	**1**		**N**		below detection limit	Con Edison
9/21	4 Blocks east of WTC Bldg. 7	**1**			**NE**	<0.25%	HP Environ.
9/15	Barclay & Broadway	**1**			**NE**	less than 1%	USEPA
9/11	Bdwy & Vesey	**1**			**NE**	0.25%	Con Edison
9/14	Ann & Park Row	**1**			**NE**	less than 1%	USEPA
9/18	Vesey & West	**0**	**NW**			1.5%	USEPA
9/15	Vesey & West	**0**	**NW**			less than 1%	USEPA
9/12	Vesey & West	**0**	**NW**			below detection limit	USEPA
9/12	Vesey & West	**0**	**NW**			less than 1%	USEPA
9/18	North Bridge & West	**0**	**NW**			not detected <1%	USEPA
9/18	Church & Fulton	**0**			**NE**	1.7%	USEPA
9/18	Church & Vesey	**0**			**NE**	less than 1%	USEPA
9/17	Church & Vesey	**0**			**NE**	less than 1%	USEPA
9/15	Church & Vesey	**0**			**NE**	less than 1%	USEPA

GROUND ZERO. Points above this line are north of GZ, points below are south							
9/18	Liberty & West	**0**	**SW**			below detection limit	USEPA
9/18	Liberty & Greenwich	**0**		**S**		less than 1%	USEPA
9/19	Dey & Trinity	**0**			**SE**	less than 1%	USEPA
9/18	Liberty & Trinity	**0**			**SE**	less than 1%	USEPA
9/17	Church & Dey	**0**			**SE**	less than 1%	USEPA
9/15	Church & Dey	**0**			**SE**	less than 1%	USEPA
9/12	Dey & Trinity	**0**			**SE**	%	USEPA
9/12	Dey & Trinity	**0**			**SE**	less than 1%	USEPA
9/11	Liberty btwn Greenwich & Trinity	**0**			**SE**	0.75%	Con Edison
9/18	Cortlandt & Trinity	**0**			**SE**	1.2%	USEPA
9/16-9/17	Courtlant Street	**1**			**SE**	0.80%	Lioy, et al.
9/11	Bdwy & Liberty	**1**			**SE**	0.50%	Con Edison
9/11	Bdwy & Dey	**1**			**SE**	0.50%	Con Edison
9/18	250 South End Ave, exterior window ledge	**2**	**SW**			2.266% (0.016 amphibole, 2.25 chrysotile)	Ground Zero Task Force
9/18	250 South End Ave, ground level courtyard	**2**	**SW**			2.069% (0.019 amphibole, 2.05 chrysotile)	Ground Zero Task Force
9/16	Albany & West	**2**	**SW**			3%	USEPA
9/19	400 Gateway Plaza	**2**	**SW**			1.7%	USEPA
9/17	Liberty & South End	**2**	**SW**			less than 1%	USEPA
9/15	Liberty & South End	**2**	**SW**			1.4%	USEPA
9/18	Albany & Washington	**2**		**S**		1.5%	USEPA
9/17	Thames & Greenwich	**2**		**S**		less than 1%	USEPA
9/17	Thames & Greenwich	**2**		**S**		less than 1%	USEPA
9/15	Albany & Washington	**2**		**S**		less than 1%	USEPA
9/14	Fulton & Nassau	**2**			**SE**	less than 1%	USEPA
9/19	300 Albany St.	**3**	**SW**			less than 1%	USEPA
9/19	Gateway Plaza (West)	**3**	**SW**			1.7%	USEPA
9/19	Carlisle & Washington	**3**		**S**		less than 1%	USEPA
9/17	Carlisle & Washington	**3**		**S**		less than 1%	USEPA
9/15	Wall & Broadway	**3**		**S**		less than 1%	USEPA
9/14	59 Nassau St.	**3**			**SE**	less than 1%	USEPA
9/19	225 Rector Pl.	**4**	**SW**			1.3%	USEPA
9/19	Hudson Tower (North)	**4**	**SW**			1.2%	USEPA
9/14	65 West St. (Christines Nails)	**4**	**SW**			less than 1%	USEPA
9/26	110 Greenwich Ave.	**4**		**S**		below detection limit	USEPA
9/15	Chase Manhattan Plaza	**4**			**SE**	less than 1%	USEPA
9/14	15 Nassau St.	**4**			**SE**	less than 1%	USEPA
9/14	Fulton & William	**4**			**SE**	less than 1%	USEPA
9/19	200 Rector Pl.	**5**	**SW**			1.2%	USEPA
9/15	West Thames & South End	**5**	**SW**			1.6%	USEPA
9/17	Thames & Trinity	**5**		**S**		less than 1%	USEPA
9/15	Rector & Trinity	**5**		**S**		less than 1%	USEPA
9/15	Thames & Trinity	**5**		**S**		1.3%	USEPA
9/14	Exchange & New	**5**		**S**		less than 1%	USEPA
9/14	Liberty & William	**5**			**SE**	less than 1%	USEPA
9/14	Trump Bldg (Pine St.)	**5**			**SE**	less than 1%	USEPA
9/19	Battery Place	**6**	**SW**			1.8%	USEPA
9/13	Wall St.	**6**			**SE**	ND	Con Edison
9/13	Wall St.	**6**			**SE**	ND	Con Edison
9/13	Wall St.	**6**			**SE**	trace	Con Edison
9/13	Wall St.	**6**			**SE**	trace	Con Edison
9/13	Wall St.	**6**			**SE**	ND	Con Edison

9/13	Wall St.	**6**			**SE**	0.1% chrysotile - 0.1% amosite	Con Edison
9/13	Wall St.	**6**			**SE**	0.10%	Con Edison
9/13	Wall St.	**6**			**SE**	0.75%	Con Edison
9/13	Wall St.	**6**			**SE**	0.10%	Con Edison
9/13	Wall St.	**6**			**SE**	0.50%	Con Edison
9/14	Wall & Pearl	**7**			**SE**	less than 1%	USEPA
9/14	Wall & Pearl	**7**			**SE**	less than 1%	USEPA
9/12	Peckslip Ave, outside dock, street,Seaport S/S	**7**			**SE**	0.50%	Con Edison
9/16	Battery Park & 2nd	**8**	**SW**			4%	USEPA
9/15	Battery Park & 2nd	**8**	**SW**			1.4%	USEPA
9/12	Truck, dirt on radiator, Seaport S/S (South St. Seaport, Fulton & Front)	**8**			**SE**	0.50%	Con Edison
9/15	Battery Park & West	**10**		**S**		1.1%	USEPA
9/17	Brklyn Battery Tunnel Entrance (North)	**12**		**S**		less than 1%	USEPA
9/16	Battery Park At Monument	**12**		**S**		2.1%	USEPA

*** REFERENCES FOR DATA SOURCES**

US EPA -- data from EPA website, www.epa.gov/wtc

ConEdison -- data supplied by the NY State Dept. of Environmental Conservation on 11/13/01 in response to a FOIA request from the NY Environmental Law and Justice Project

NYS DOL -- data from the NY State Dept. of Labor, supplied by the NY State Dept. of Environmental Conservation on 11/13/01 in response to a FOIA request from the NY Environmental Law and Justice Project

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APPENDIX 2 – ASBESTOS STUDIES OMITTED FROM ATSDR AND EPA RE-EVALUATIONS RELEVANT TO:

— **Mesothelial Tissue and Lung Tissue Asbestos Burden Studies in Human Mesothelioma Cases**

— **Carcinogenicity of Chrysotile Asbestos**

[LISTED IN INVERSE CHRONOLOGICAL ORDER]

Accepted for publication in the American Journal of Industrial Medicine, 4/28/03

Asbestos Fiber Length as Related to Potential Pathogenicity: A Critical Review

Ronald F. Dodson, Ph.D., FCCP, FAHA; Mark A.L. Atkinson, M.A., D.Phil.; and Jeffrey L. Levin, M.D., M.S.P.H.
The University of Texas Health Center at Tyler, Tyler, TX

Ann N Y Acad Sci 2002 Dec;982:160-76

Asbestos fibers contributing to the induction of human malignant mesothelioma

Yasunosuke Suzuki and Steven R. Yuen
Department of Community and Preventative Medicine, Mr. Sinai School of Medicine, 1 Gustave L. Levy Place, New York City, New York, 10029, U.S.A.

J Toxicol Environ Health A 2002 Aug 23;65(16):1109-20

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Chest Department, CUB Hopital Erasme, 808 Route de Lennik, B1070 Brussels, Belgium. pdumorti@ulb.ac.be

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Asbestos tissue burden study on human malignant mesothelioma.

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Department of Community and Preventive Medicine, Mount Sinai School of Medicine, New York, New York, USA.

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Asbestos in extrapulmonary sites: omentum and mesentery.

Dodson RF, O'Sullivan MF, Huang J, Holiday DB, Hammar SP.
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Frank AL, Dodson RF, Williams MG.
Department of Cell Biology and Environmental Sciences, University of Texas Health Center, Tyler 75710, USA.

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Arthur M. Langer and Robert P. Nolan
Environmental Sciences Laboratory, Applied Sciences Institute of Brooklyn College, Brooklyn, New York

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Department of Ultrastructures, Istituto Superiore di Sanita, Rome, Italy.

Environ Res 1992 Aug;58(2):163-75

Asbestos in organs and placenta of five stillborn infants suggests transplacental transfer.

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Department of Pathology, University of Texas Medical Branch, Galveston 77550.

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A comparison of asbestos burden in lung parenchyma, lymph nodes, and plaques.

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APPENDIX 3 – MEMORANDA BY CATE JENKINS ON WTC FALLOUT

The following is a list of earlier memoranda prepared by myself addressing toxic exposures to WTC fallout. These memoranda were distributed to several large email lists of citizens, environmental activists, scientists, and governmental officials, including those in EPA and in the NYC DEP and DOH. Many of these memoranda are posted on the NY Environmental Law and Justice and George Mason University 911 Digital Archive websites at:

www.nyenvirolaw.org/nyeljp-jenkins.htm
www.911digitalarchive.org/collections/reports

DATE	ADDRESSEES	TITLE OF DOCUMENT
11/15/01	Monona Rossol, Arts, Crafts, and Theater Safety, NYC	EPA National Standards vs. New York City Guidelines, Cleanup of Dusts from World Trade Center
11/20/01	Walter Mugdan, Regional Counsel, EPA Region 2	TRADE CENTER ASBESTOS DUSTS – Rebuttal to claim that national asbestos standards do not apply to the cleanup of residences, business locations, or homes in lower Manhattan
12/3/01	Lillian Bagus, Chief, Waste Identification Branch; Robert Dellinger, Director, Hazardous Waste Identification Division, EPA	WORD TRADE CENTER ASBESTOS
12/7/01	Responsible Parties for Evaluating Asbestos Cleanup Procedures in Buildings in Lower Manhattan after the World Trade Center Collapse	Adequacy of asbestos removal from carpets using dry-type HEPA vacuum cleaners
12/19/01	Affected Parties and Responsible Officials	1) Wipe sampling for asbestos in Lower Manhattan, 2) Projection of airborne levels from settled WTC dusts, 3) Estimation of increased cancer risks based on various WTC dust exposure scenarios
1/11/02	Affected Parties and Responsible Officials	PRELIMINARY ASSESSMENT: 1. Asbestos in Manhattan compared to Libby Superfund site. 2. Why cleanup of WTC contamination is ineffective to date. 3. Advantages of cleanup under Superfund statute. 4. Summary risk assessment for WTC fallout
2/7/02	email note, no explicit addressees, sent to all mailing lists	Use of the National Contingency Plan for cleanup of WTC fallout
2/10/02	Affected Parties and Responsible Officials	NYC DEPARTMENT OF HEALTH MISREPRESENTATIONS February 8, 2002 press release: “NYC Department of Health Presents Findings from Indoor Air Sampling in Lower Manhattan”

1/14/02	—	LIBBY vs. MANHATTAN – DIFFERENT ASBESTOS TESTING METHODS, Table
2/11/02	—	Comparison of the test method sensitivities used by EPA and the levels related to health risks for key toxic substances related to the collapse of the World Trade Cener — DRAFT
3/11/02	Affected Parties and Responsible Officials	Status of air and dust asbestos testing after WTC collapse: 1) Misrepresented "safe levels" and standards for asbestos, 2) Failure to test at low levels related to safety, 3) Region 2 relied on more sensitive TEM tests for settled dusts in own building, required by EPA policy, did not provide same sensitive testing for rest of NYC, and refused, 4) Region 8 offer of free sensitive testing for rest of NYC
3/29/02	Ed Light, CIH, Building Dynamics, LLC	Dioxin contamination of offices after WTC collapse and transformer fire: Suggested criteria for cleanup levels
4/30/02	Affected Parties and Responsible Officials	TEM vs. PLM METHODS FOR ASBESTOS DUSTS: – TEM found over 1% asbestos, but PLM tests showed NONE – EPA PLM tests of WTC fallout dust may have underestimated area of asbestos contamination – EPA Region 2 knew TEM was required and needed, had it after the WTC collapse for their own building, used it in past, but refused to use it for the rest of NYC
6/9/02	Affected Parties and Responsible Officials	TESTING CARPET, THE ASBESTOS RESERVOIR: – Best test for carpets; EPA ultrasonication method – No consultants needed; only cost is the lab fee – EPA shows HEPA vacuuming does not remove asbestos – EPA and other asbestos dust benchmarks/safety levels
7/3/02	Affected Parties and Responsible Officials	1. UPDATED LIST -- LABS FOR EPA's ULTRASONICATION TEST FOR CARPETS 2. EPA WILL TRY TO REVERSE EARLY STUDIES SHOWING HEPA VACUUMS INEFFECTIVE
8/29/02	Joel Kupferman, NYELJP; Other Concerned Parties and Responsible Officials	Stuyvesant High School Testing – EPA validates use of sonication testing – Brookfield CT school system using sonication
10/22/02	TERA COPC Committee, Responsible Officials and Affected Parties	COMMENTS – TERA SEPTEMBER 2002 PEER REVIEW DRAFT. World Trade Center Indoor Air Assessment
2/21/03	Richard Troast, EPA, Office of Solid Waste and Emergency Response	MISSING/OMITTED STUDIES FROM EPA DRAFT ASBESTOS RISK REASSESSMENT RELEVANT TO: 1. Mesothelial and lung tissue burden in mesothelioma cases. 2. Carcinogenicity of chrysotile asbestos