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Nine days after the Sept. 11 attacks, on the first day that many stores in the area reopen, worker Touze Martes sweeps near the site of the World Trade Center wreckage.

# The toxic fallout of 9/11

Despite early assurances from the Bush administration, new studies are finding alarming health problems and risks related to the cloud of debris that enveloped lower Manhattan.

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**By Abrahm Lustgarten**

PRINT EMAIL

Aug. 15, 2003 | NEW YORK -- For more than a year after the Sept. 11 terrorist attacks, 200 hazardous-waste workers reported to work every morning inside the Deutsche Bank building in downtown Manhattan. They pulled white Tyvek suits over their street clothes; stretched dual-

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filtered breathing masks over their faces, and systematically sealed themselves off from their surroundings. The interior was so toxic that they could not enter the building any other way.

Inside, the workers tromped through a fine, fluffy gray dust that had settled across a floor strewn with loose papers, discarded computers, and iron beams from the fallen World Trade Center towers next door. The dust, 3 feet deep in places, filled the hallways. A dangerous toxic mold spread from the two damp basement levels, shooting sticky black vines like alien fingertips through the elevator shafts to the upper floors. On the north side of the building a 24-story-tall gash exposed the dust and mold to the wind, sun and rain. Most of the windows were gone.



The building was directly downwind of the plume of toxic debris pumped through Manhattan and Brooklyn by the force of the Trade Center collapse, and it provides one of the best records of what made up the cloud. For months after the attacks, the U.S. Environmental Protection Agency insisted that the dust contained few contaminants and posed little health risk to anyone but those caught in the initial plume from the towers' collapse. "Everything we've tested for, which includes asbestos, lead, and volatile organic compounds, have been below any level of concern for the general public health," Christine Todd Whitman, then the Bush administration's EPA chief, told PBS "NewsHour" in April 2002. Even last December, assistant regional EPA administrator Kathleen Callahan reiterated that assessment before the New York City Council: "I think the results that we're getting back show that there isn't contamination everywhere."

But Deutsche Bank's owners, curious to know the extent of their liability and to properly evaluate the potential danger to their own employees, privately conducted their own extensive tests. The findings: Astronomical levels of asbestos and a long list of toxic ingredients that pose a significant risk of cancer, birth defects, nerve damage and other ominous health problems.

More than 2,000 buildings in lower Manhattan were exposed to the same wave of debris and dust, and many were filled with residents and office workers within days after the attacks. Today, the Deutsche Bank findings and an emerging body of studies by private agencies and the EPA itself sharply contradict the initial EPA assessment and suggest that the federal government overlooked a substantial threat that could ultimately harm more people than the terrorist attacks.



The cloud of pulverized debris was a virtual soup of toxic substances: Cancer-causing asbestos. PCBs -- one of the most toxic and dangerous industrial chemicals -- from a giant electrical transformer and waste oil. Mercury, which can cause nerve

damage and birth defects, from the thousands of laptop computer screens that were atomized that day. Thousands of tons of pulverized concrete, which can sear the soft membrane of the lungs. Dioxin, which can damage the central nervous system and cause birth defects. The EPA's final report on air quality released in January 2003 called the Trade Center collapse the largest single release of dioxin in world history -- more than enough, on its own, to establish lower Manhattan as a federal Superfund site.



Immediately after the towers collapsed, and as fires burned for days afterward, that cloud filtered its way through window seals and ventilation ducts of thousands of buildings, even those thought to be undamaged and safe. It accumulated in the corners of homes, behind bookcases and under beds. Even today, it is in the carpeting of schools and on the desktops of offices, in the ventilation systems of many buildings that have not been cleaned.

Under fire from residents, businesses and local officials, the EPA finally reversed its position in May 2002 and launched an effort to clean 6,000 residences. But the program was voluntary, outreach was dismal, and it addressed dust issues in less than 20 percent of the apartments in lower Manhattan. It did nothing to ensure that the thousands of offices, stores, restaurants and other business spaces in the district were safe for human occupation. Even the EPA's in-house inspector general, in a draft of a report due out next month, slammed the agency for erroneously reassuring residents and workers that all was well in the days after the attacks. Citing information from a high-ranking EPA official, the draft report said agency statements in the days after the terrorist attacks were "heavily influenced" by environmental advisors in Bush's White House.

Local politicians accuse the EPA of deliberately misleading the public through what Democratic Rep. Jerrold Nadler, who represents the downtown district, calls a campaign of "lies and half-truths."

"The EPA response to the Sept. 11 attacks was more than a complete disgrace," Nadler said earlier this summer in an interview about Whitman's tenure as chief of the agency. "It was, in fact, malfeasance." One study published this month blames the Trade Center dust for the premature and underweight births of dozens of babies born since 9/11. Some doctors say the accumulating effect of long-term exposure to these contaminants could leave thousands of people with cancer, heart disease, lasting respiratory ailments or debilitating allergies. For the residents and workers in lower Manhattan, coughs persist, hospital visits continue and options for recourse are dwindling.

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Photograph by AP Photo/Ted S. Warren

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Diane Van Dyke was standing with her husband Bob in the middle of their fourth-floor Stone Street loft and recording studio on the morning of Sept. 11, 2001, when the building began to shake. They did not yet know about the hijacked airplanes -- they just felt the buildings collapsing five blocks away. From their windows they watched what they described as a "snowstorm" fall across the canyon of buildings and streets between their apartment and ground zero. Before they could grasp what was happening, a thick blizzard of whitish gray debris cut their view of the outside world. Then the pelting started. To Diane it sounded like tons of gravel were being dumped on the roof of their century-old building. Through the skylight, they watched the dust turn the sunlight into blackness.

Unlike most downtown residents, the Van Dykes were never evacuated. They had electricity and water and so it seemed natural to hole up at home -- it was the safest place they knew. The dust settled inside immediately, but whether it came through drafty window seals, the rooftop ventilation duct, or off the clothing and hair of the ghost-like people they let in from the street, Diane never knew. "I wouldn't even describe it as dust. It's finer than talcum powder," she said. "It's the kind of stuff that gets in the fiber of your clothes. You can't just brush it off." But what she saw collecting inside her home faster than she could wipe it away was nothing compared to the litter of documents, suitcases, buildings, and body parts three-feet-deep outside. Even as she wiped the loft down, Diane felt fortunate.

It was on Sept. 13 that Christine Todd Whitman first announced that New York's air and water were safe. According to Nadler, Whitman's proclamation came before the EPA had received a single test result for sampling of indoor air or dust, but even so, her words provided the reassurance that Diane needed. The Van Dykes could have evacuated to a place with safe, clean air, but Diane continued to clean her apartment instead.

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That same day, however, a small cut on her leg grew inexplicably swollen and infected. Both Diane and Bob, like thousands of downtown residents and workers, said they developed a persistent dry cough in the weeks that followed. Diane diligently followed common sense and the instructions the EPA slipped under her door: use a wet mop to dust regularly and vacuum with a specialized High Efficiency Particulate Air filter (HEPA) that traps and removes extremely small particles. She wrapped her air conditioner in blankets, sealed the filter from her heating vent in a plastic bag, and shut off all the ducts.



Meanwhile the fires at Ground Zero continued to burn. Street cleaners and Army trucks kicked up the smoke and ash throughout the Financial District. When Diane's cuts and scrapes didn't heal, when her nose bled from dry cracking in the membranes inside her nostrils, she began to suspect that despite the EPA's assurances, the dust she was continuously cleaning was affecting her health.



Eight weeks after the attacks, in the middle of the night, Diane lay in bed wide-awake. The right side of her neck, face, and head throbbed with incessant pain that had grown worse over the last two days. Once, she had an abscess in her tooth. This felt like an abscess in her eardrum.

Three days later the pain was unbearable. At New York University's Downtown Hospital Emergency Room, doctors diagnosed Diane with an ear infection. Two men she met in the waiting room described the same pain, but Diane's doctors told her there was no association with the dust and the downtown cleanup.

Antibiotics cleared her infection, but her frequent colds, respiratory infections, allergies, and low energy levels have lingered. Over the past year Diane said she has called in sick to her waitress job an average of three days each month. She hadn't missed three days in the entire year before Sept. 11. "I just haven't been feeling very good. My breathing is bad. Every time something goes around I get sick," she said. "I'm not the calm, focused person I used to be."

The Van Dykes looked to the EPA for answers, but like many residents now campaigning for government help, they have found little resolution. Indeed, for nine months after Sept. 11, the EPA insisted that the dust contained few contaminants and posed little health risk to anyone but those caught outdoors in the initial plume from the towers' collapse. The agency and the city Health Department referred to hundreds of their own tests, few of which have been made fully public. The agencies asserted that none of the hundred or so buildings they tested required abatement, but their results were criticized from the start as incomplete and nonspecific -- even

from departments within the EPA.

Doubting the government's findings, the Ground Zero Elected Officials Task Force -- including Nadler, New York state Assembly Speaker Sheldon Silver, and City Council member Margarita Lopez -- conducted their own independent study and released results in October 2001. The task force looked at samples from two downtown apartments and found asbestos levels in the dust nearly 460 times the EPA's allowable limit. The task force study was the first in a series of independent efforts that slowly began to chip away at the EPA's findings.

In June 2002, nine months after the attacks, the EPA opened its help lines for the first time to residents wanting testing and cleaning in their apartments. "We were told that somebody would come by. We were told so many different things. I don't think I've gotten an honest answer from them," Diane said about her early conversations with EPA officials. "Then I heard one day on the news that they didn't think there was a problem, but just to make people feel better they were going to send people to clean. And it occurred to me, these people they were going to send, they weren't going to be scientists or anything."

Despite their skepticism, the Van Dykes immediately signed up. It was seven months before they received a call to schedule a cleanup.

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Joel Kupferman wheels his office chair about the tiny space left between the three desks and thousands of loose-leaf pages piled in his 8-by-8 foot office at the New York Environmental Law and Justice Project, just across the street from the regional EPA headquarters on Broadway. It's a shoestring firm that built a reputation representing voiceless underdogs in heated anti-government battles.

In November 2001, skeptical residents of the Tribeca Tower called Kupferman's office for help. The New York City Department of Health had tested for asbestos throughout the 52-story building and found nothing. Kupferman hired an independent contractor to re-test in the building using a highly sensitive electron microscope method. A certified industrial hygienist took samples throughout the building, finding an alarming 550,000 structures of asbestos per square centimeter -- 550 times the safe limit of the microscopic fibers -- in a hallway ventilation duct that circulates fresh air throughout the building. Kupferman repeated his investigation in five other buildings, finding dangerous amounts of asbestos in each one, and he began to see a pattern.

Tests conducted by governmental agencies using weaker microscopes were not detecting the unusually fine and fractured asbestos particles that resulted from the phenomenal force of two 110-story skyscrapers collapsing. Tests from inside EPA's own offices drive the point home: Their samples showed a 40 percent increase in asbestos detection using electron microscopes. "They didn't really want to find the stuff," Kupferman said, "and so they succeeded in not finding stuff again and again."



EPA spokesperson Mary Mears bristled at that accusation. "There are certain differences of opinion that will not be resolved," she said, explaining that she could not comment on the private residential lab results because they may

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not have been collected using precise EPA methods. "We do not agree that this is a public health concern," she said. "We have not seen the evidence, we do not see the danger. And personally, I think it's a shame to think the peoples' civil servants [EPA employees] would lie to them."



When another of Kupferman's tests at a Franklin Street apartment yielded the highest levels of asbestos found in a Manhattan residence, EPA and city Department of Environmental Protection investigators agreed to come and take a look. According to Kupferman, the two agencies split the same samples, tested according to their respective methods, and returned telling results. Using the cheaper and simpler microscope method, the DEP failed to find any asbestos. Using an electron microscope, EPA testers returned a reading five times the agency's safety threshold.

"A week-and-a-half later the EPA announces that they are going to do the whole indoor cleanup of residences downtown. I think this was the catalyst," Kupferman said. "We put the facts on the table."

On June 8, 2002, despite its earlier insistence that cleaning indoor spaces was beyond the EPA's jurisdiction, the agency launched what it described as a comprehensive residential testing and cleaning program. The plan failed to address commercial buildings, leaving that issue, without explanation, to private property owners. It did, however, take a giant step toward placating Bob and Diane Van Dyke and other residents angered about air quality issues.

But while Callahan and the EPA see the cleanup as a successful program that answers earlier criticism of the agency's 9/11 response, critics on the New York City Council and elsewhere poked holes in its premise. The program was voluntary, they complained. Only residences that looked contaminated to the naked eye qualified for cleaning, and the cleanup addressed only asbestos and ignored the dozens of other microscopic contaminants in the dust. At the end of the day, the critics said, the cleanup was flawed because it did not require that a building be shut down and cleaned all at once. Crews might clean one floor, then, but the toxic dust could still find its way back to that floor on residents' shoes, or in the ventilation system, or just drifting on the air.

"The issue of not cleaning common spaces -- hallways, lobbies, foyers -- and then allowing people to drag into their now-cleaned apartment what was outside and not cleaned makes no sense," said Dr. Steven Levin, head of Mt. Sinai's World Trade Center Worker and Volunteer Medical Screening Program treating workers exposed to the toxic dust. "To not consider that question makes it clear that this was just an approach to appease, and not to solve a genuine problem. I think that's unfortunate."

The critics say all the unsound aspects add up to a program that was never intended to be effective in the first place, an assertion the EPA and its spokeswoman, Mary Mears, deny. "While we felt there wasn't a big risk in the long term, we felt a need to offer something to those residents. We do not feel this is a public-health emergency," she said. "But it goes well beyond anything that could be called a P.R. campaign."

When the Van Dykes' apartment was finally cleaned on Feb. 5 this year, seven workers spent four hours on the 2,200 square foot space. None of them wore the waist-level air monitors Mears

insisted all crews would have as a safety precaution. No one wore facemasks, respirators, or even plastic gloves, even though the site supervisor had determined that all of the Van Dykes' upholstered furniture, mattresses and bedding were contaminated and should be thrown out. Hot water was used to remove dust from ventilation grates; Murphy's Oil was spread on the floors. The carpets, which remained, were not vacuumed using the wet methods prescribed on the EPA's Web site. Neither were the drapes. HEPA vacuums were used, but when a hose abruptly popped off the machine and dust spewed onto the freshly vacuumed floor, the hose was simply reattached and the floor was not re-vacuumed. The cleaning process appeared no different from a standard housecleaning.

"I don't understand that," said Levin, of Mt. Sinai. "If you think that there is a significant hazard that you ought to be using a HEPA filter and vacuum, why not place an adequate filter in front of the mouth and nose? They never told people they should wear respiratory protection."

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Beyond the asbestos, beyond the visible dust and pulverized concrete and all the known contaminants addressed by the residential cleanup program are a slew of worse substances that have been virtually ignored in the public debate. In 6 World Trade Center, a U.S. Customs laboratory specializing in testing of toxic chemicals, fuels and metals was operating at the time of the attacks. It was irreparably damaged and subsequently demolished. The exact volume of chemicals in the building on 9/11 is unknown, but waste manifests from the New York Port Authority show that large amounts of arsenic, mercury and other dangerous substances were removed from the building on a regular basis in the years leading up to Sept. 11.

And according to the Natural Resources Defense Council, two Con Edison substations in the basement of Building 7 stored 130,000 gallons -- the equivalent of nearly 2,400 55-gallon barrels -- of PCB-contaminated waste oil on Sept. 11. They also contained working transformers that had PCBs in them. PCBs pose an extraordinary risk to human health: They are a probable carcinogen, and other effects include damage to unborn fetuses, to the reproductive, immune and nervous systems, and to the gastrointestinal system and liver.

A University of Toronto study looked at the dissipation of these PCBs and, swabbing filmy residue from glass windows on the outsides of downtown Manhattan buildings, found that samples contained 10 times the normal amount of PCBs usually found in East Coast urban areas like Baltimore and Philadelphia. The concentrations decreased with distance from ground zero. According to the EPA's own final report on air quality, levels of PCBs in street-level air sampling in the two months immediately following Sept. 11 ranged from 18 to 150 times normal background levels. The EPA characterized those levels

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as just "slightly elevated," and said levels returned to "normal" in the months that followed.

The EPA concluded that, because the period of exposure was so short, PCBs did not pose a public health threat in New York. But the EPA report did not consider the possibility of long-term exposure to PCBs through indoor dust or other means, like seepage into the neighboring Hudson and East Rivers and the ocean. Environmental experts point out that the high levels of contaminants the EPA says dissipated from the air in the first few months after 9/11 had to go somewhere -- and they settled into the dust, along with a long list of heavy metals.



William Horgan is a certified industrial hygienist working for Assessment Resources and Technologies, Inc., a New York consulting firm specializing in property and hazard assessment. No one in New York spent as much time testing for heavy metals, let alone volatile organic compounds like dioxin and PCBs, after the Trade Center attacks. "I see the heavy metal contamination as equal to if not greater than the asbestos contamination," Horgan said, reflecting on more than 150 floors in high-rise buildings he has personality analyzed. "Pretty much on every floor we found one of the components: lead, cadmium or mercury."

When it comes to heavy metals, the EPA's January 2003 final report on air quality in Lower Manhattan is contradictory and confusing. It says that indoor dust samples "did not appear to show any notably high lead contaminations." But then it goes on to state: "Indoor exposures to lead-contaminated WTC-derived dust that penetrated indoors could continue to pose risks to individuals reoccupying buildings not cleaned by effective decontamination procedures." The report concludes that while heavy metal levels outdoors were alarmingly high following Sept. 11, they returned to normal background levels after just a few months and were unlikely to pose a human health risk. It did not address the indoor risk.

But Horgan calls the EPA reports about heavy metals and organic compounds misleading. Roughly 75 percent of the tests he conducted found lead levels above the U.S. Department of Housing and Urban Development threshold requiring lead abatement. And while mercury is rarely found indoors, he found it in dozens of buildings -- making the levels even more alarming. "In the years I've been doing this, I've never found mercury in any of our buildings," he said. "Why all of a sudden would we find mercury?"

It's not a leap to figure out where all this stuff came from, Horgan said. Mercury was used in the screens of laptop computers -- thousands of which were inside the twin towers -- as well as in fluorescent lights. Cadmium, another metal found in testing, can be found in batteries and paints. The lead could be from the paint in the World Trade Center towers or from the solder on the pipes, the chrome from the chromium steel used in the buildings' beams, the anodized aluminum used to build the two airplanes that crashed into them, or even the dye used in the leather and fabric covering the thousands of office chairs inside.

Worse still, an alarming report of dioxin contamination -- a carcinogenic byproduct of partially burnt materials like wood, chairs, and jet fuel -- comes directly from the EPA. The final report notes dioxin levels as high as 1,000 times normal urban background levels and calls the WTC dioxin release the largest in the world -- with concentrations 170 times the size of the second-largest known North American release at an incinerator in Buffalo, N.Y. "It would be reasonable

to conclude that the concentrations to which people could potentially be exposed ... within or near the WTC site found through the latter part of November [2001], are likely the highest ambient concentrations that have ever been reported."

In reaction, Nadler, Kupferman and others asked the EPA to designate lower Manhattan a federal Superfund site -- a designation they say would not only establish a clear protocol for cleanup, but show that the EPA takes the hazard seriously. The EPA report states clearly that the levels of dioxin found and the estimated human exposure that would result would normally trigger a Superfund designation, but then inexplicably dismisses the risk only a paragraph later: "The EPA judges these incremental cancer risks to be of minimal concern." The EPA report states, again, that long-term exposure is not a risk because ambient air levels returned to normal. The agency has conducted several hundred tests for metals and organic compounds in indoor dust since the residential cleaning began, but few results have been released.

When asked whether a risk from dioxin exposure remained, EPA spokeswoman Bonnie Bellows said only that whatever risks existed have been -- and are being -- addressed by the cleanup. Bellows said the EPA and local government agencies had adequate systems in place to handle the lower Manhattan cleanup, and that the protocol that would be established under Superfund would be superfluous to systems already in place. A Superfund designation in New York would also make cleanup astronomically expensive.

"Superfund is there primarily to deal with abandoned sites and where there is no other source of funding for cleanup," Bellows said. "The bottom line is that there were hazardous materials present in the dust from the World Trade Center. It was addressed and cleaned up, and it's completely acceptable to clean up without having it listed on the national priorities site."

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Today, while the long-term affects remain a mystery, health professionals are still working overtime treating the short-term health effects that continue to emerge. People like Diane Van Dyke, whose cuts won't heal and whose breathing is bad, continue to complain to their doctors. Levin said in March that 50 percent of the 2,500 workers he had examined experience upper and lower respiratory problems. The National Resources Defense Council Environmental Impact report estimates that as many as 10,000 New Yorkers living or working near Ground Zero suffer health effects related to air pollution from 9/11. Earlier this month an article in the Journal of the American Medical Association asserted that dozens of newborns had a low birth weight after their mothers were exposed to dust from the Trade Center collapse. And according to Dr. Stephen Markowitz, who heads the Center for Biology and Natural Systems at Queens College, nearly all of the 400 laborers who worked on building cleanups and consulted a mobile medical clinic exhibited lasting health affects, including respiratory infections, allergies and skin rashes. The workers breathed the same dust that is in residents' apartments.

Surprisingly, it's the pulverized concrete that presents the greatest short-term health threat, Levin said, because it's highly alkaline. A U.S. Geological Survey study of the particulate matter at Ground Zero conducted from Sept. 17-18, 2001 found that the pulverized concrete in the dust had a comparable alkalinity to liquid ammonia. Breathing in concrete dust into moist internal organs is like re-mixing cement in the lungs, and once it becomes a liquid again, it will burn and scar the tissue it contacts.

But heavy metals, organic compounds and asbestos present the greatest long-term threat. According to the Centers for Disease Control, breathing larger fibers of asbestos deeply over prolonged periods of time can cause a condition called asbestosis, a swelling and irritation that will permanently scar the inside of the lungs, impairing breathing, and possibly even leading to death. It can also cause mesothelioma, a usually fatal cancer of the thin

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membrane that surrounds the internal organs, or other cancers of the lung, pancreas, or stomach.



Levin said that while he does expect respiratory ailments and immune deficiencies to increase, he does not expect to see a significant rise in cancer rates related to the Trade Center dust. His optimism is a gut feeling based on health histories of workers with career-long exposure to similar contaminants, like plumbers who work in dusty, asbestos-filled basements. But ultimately, he doesn't know. In either case, he said, the government's wait-and-see attitude is an irresponsible approach to public health. "Finding illnesses after the fact," Levin said, "it's what you could call in crude epidemiological terms, counting the bodies."

Nadler agrees, warning that what seems like minimal contamination now will add up over years of consistent exposure. Thousands of workers and residents may breathe minimal amounts of lead or asbestos unwittingly over the next decade because their buildings were never cleaned. "The problem you have in things like asbestos and fine particulate matter is the length of exposure," then-EPA director Whitman said in the PBS Newshour interview. "It's not so much one hit, it's if you live with it over time." Still, it could be 20 or 30 years before doctors and residents fully understand the public health implications of the dust exposure. And there are other implications too.



In a January 2003 draft report of a scathing, as yet unreleased assessment of the EPA's response in lower Manhattan, the agency's own Inspector General's office concluded that the EPA did not have the proper information to assure residents that the air was safe to breathe, that the standards the agency set for asbestos levels were unusually low and inconsistent with EPA regulations, that the clean-up was compromised by cost-cutting, and finally, that the Bush administration played an unusual and inappropriate role in editing and shaping all of the information released by the EPA to the public. This indicting report is due out this September, long after the damage has been done.

Each time the EPA told the public the air was safe, each time it reversed a decision, or changed a statement, it lowered the public's confidence in its expertise. "The loss of credibility is a serious concern because now that people are still wrestling with questions they don't feel that they can trust the government to speak honestly to them," Levin said.

Clearly, New Yorkers' trust in the Bush administration on these issues is already at the breaking point -- or past it. Just before Christmas last year, the New York City Council held an acrimonious hearing to evaluate what the federal government was doing to ensure the health of residents. About 80 residents, environmental and occupational health professionals, lawyers, and politicians

packed the chamber seats; inscribed on the ceiling overhead, Lincoln's famous words -- "a government of the people, by the people, for the people" -- hung like a gold-lettered question in the air.

Almost a year and a half after the attacks on the World Trade Center, the council and its audience were still seeking clear explanations from the EPA. Lopez and other council members wanted to know why the EPA's health risk standard for New York was 100 times less stringent than the standards used by the agency for asbestos cleanup across the country. They wanted to know why residents were still being instructed to mop up contaminated dust in their own apartments despite federal laws that require respirators, protective body suits and professionally trained staff for the removal of cancer-causing asbestos material. And they wanted to know why, after so many meetings and so much debate and criticism, the EPA still could not explain the science behind its methods.

Kathleen Callahan, assistant regional EPA administrator for New York City response and recovery operations, was there on behalf of the Bush administration. Council member Margarita Lopez braced both hands firmly on the long oak bench and took the microphone, then leaned toward Callahan and in a voice seething with anger, told her that the EPA's patronizing manner of response to months of criticism and pleas for help would no longer be tolerated.

"I am not satisfied with your answers to these questions, in all honesty, and I think that this committee should not be satisfied," Lopez said, her tone rising. "This is reality. The air down here was filthy like hell with pollutants that can kill each and every one of us. It's not that people down here are just paranoid about what happened."

The audience broke into applause.

Little has improved since then, critics say. The EPA, which had originally received close to 6,000 requests by residents to clean residential units, closed the cleaning program after cleaning or testing about 3,950 apartments as of July. About 5 percent of the apartments cleaned were listed as "not cleared" or "not determined," meaning that they were found to contain an abundance of harmful material or that so much dust was present the machines that measure it were clogged and could not obtain an accurate reading. Either way, they need to be re-cleaned, and re-tested.

Nadler worries the issue will go beyond public discontent, and will result in millions of dollars in claims against the city and state. It was the environmental and health agencies that gave advice against their better knowledge when they told people to clean contaminated dust, or to return to their contaminated apartments in lower Manhattan, he said.

"People 20 years from now who come down with various illnesses will sue the city," Nadler warned at the December council meeting. "They'll say: 'But for your negligent advice I would not have done that, I would not have gotten sick.'"

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**About the writer**
Abrahm Lustgarten is a New York writer and photographer who reports on the environment, health and sports.

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