

The air of uncertainty

Experts weigh health risks of twin towers fires & dust

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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.

For months, toxic contamination in the smoking rubble and billowing dust from the site of the terrorist attacks has prompted fears of illness among wheezing firefighters and rescue workers, anxious students, office workers and casual passersby.

Health officials now believe that most of those affected — excepting unprotected workers at Ground Zero directly exposed to toxins — are not likely to suffer permanent damage to their health from any single pollutant.

That tenuous assurance comes with an unsettling caveat: Scientists know next to nothing about the effects of the unprecedented mix of hazardous substances at the disaster site. That included troubling amounts of cancer-causing agents such as benzene, polychlorinated biphenyls (PCBs) and asbestos.

"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."

Say safety overstated

More information may come at a hearing tomorrow requested by Sen. Hillary Clinton (D-N.Y.), and an investigation by the Environmental Protection Agency's ombudsman.

"I think people want definitive answers, and there aren't any," said Regina Santella, a professor at Columbia University's Mailman School of Public Health.

But many people think government officials have overstated safety at the site.

Two days after the attacks, an EPA press release called initial test results "reassuring." It cited "no asbestos or very low levels" and said other compounds "were not detectable or not of concern."

On Sept. 18, EPA Administrator Christie Whitman issued a statement reassuring "the people of New York and Washington, D.C., that their air is safe to breathe and their water is safe to drink."

The EPA also cautioned site workers to wear respirators and

told tenants to be careful in cleaning up Trade Center dust.

But Whitman's general assurances resonated loudest with many, among them firefighters, who then shunned respirators.

"We gave precautions, but what people heard overwhelmingly is that everything down here is just perfectly safe," said Mary Helen Cervantes, an EPA spokeswoman.

The EPA didn't release data to support its conclusions until late October, under pressure from an environmental law group.

The data showed that benzene — a known cancer-causing substance found in emissions from burning coal and oil products — had been detected at levels 58 times above federal workplace standards. Hearing that, many felt misled by the earlier assurances.

"There were plenty of opportunities for them to say, 'Hey, look, we just don't know,'" said Joshua Rockoff, 25, who lives in Battery Park City.

The benzene figure by itself is

startling, but the standard is based on consistent exposure — eight hours a day, 40 hours a week — over 30 years. No one came close to that exposure.

Santella, who studies the impact of pollution on cancer rates, said the benzene reading indicates that only workers in the rubble face any risk.

"It was taken almost below ground level, directly over the fire," Santella said. "But if you look at a sample that was taken a few feet away, it's low."

However, many who took Whitman's assurance at face value no longer trust the EPA.

Firefighter union officials accuse the agency of overstating safety to appear in control. "I think that was the message they were attempting to send out, and I think we have a problem now because of that message," said Tom Butler, a spokesman for the Uniformed Firefighters Association.

Perhaps the most sustained cause for worry has been asbestos, a fire retardant used in the

Trade Center. It became part of the superfine dust that pervaded apartments and offices.

The EPA said outdoor tests for asbestos showed no cause for concern. But responsibility for indoor samples fell to the city Department of Health, which still hasn't released results.

Neighbors affected

Left in the breach, landlords, tenants and businesses had to decide for themselves whether to pay for costly asbestos testing and abatement or just mop up.

Howard Tisch, 62, a lawyer who lives in Battery Park City, said he and his wife, Carol Tisch, decided to pay a lab to analyze samples from their home.

"It showed allowable levels, but it was there — more than normal, but less than what they said was hazardous," he said.

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Groups of parents at several lower Manhattan schools hired consultants and lawyers, who pushed the Board of Education to expand environmental tests.

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

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.

"The cleanup around Ground Zero was uncoordinated and haphazard," said Dave Newman, an industrial hygienist for the New York Committee for Occupational Safety and Health.

HP Environmental, a Reston, Va.-based company, determined that the chrysotile asbestos fibers in the dust were more likely to be small — meaning they might more easily work their way into the lungs, even though larger fibers are generally considered more dangerous.

HP also found that the material that once held the asbestos together had been so pulverized that the fibers became easily airborne when disturbed.

HP scientist Hugh Granger suspects that in the days after the attacks, EPA scientists were silenced by political concerns.

"The people at EPA are 10 times brighter than I am," said Granger. "I think some people who really know the answers to all this are being a little coy."

Dr. Mahan Sukumaran, a pul-

monary specialist and director of intensive care at NYU Downtown Hospital, said he has seen 100 "WTC cough" patients at his Tribeca office, many with no history of respiratory problems. He blames the condition on irritants in the dust cloud.

"Every single person with lung problems got worse," Sukumaran said. "Fortunately, all the people undergoing treatment are improving."

Again, health experts are critical of early assurances by the EPA that dust from concrete and fiberglass insulation was within acceptable safety standards simply because particles were small.

NYU's Thurston said it was the larger particles that proved most irritating.

"People got the signal from the EPA and others that the levels of fine particles were not a significant threat," he said.

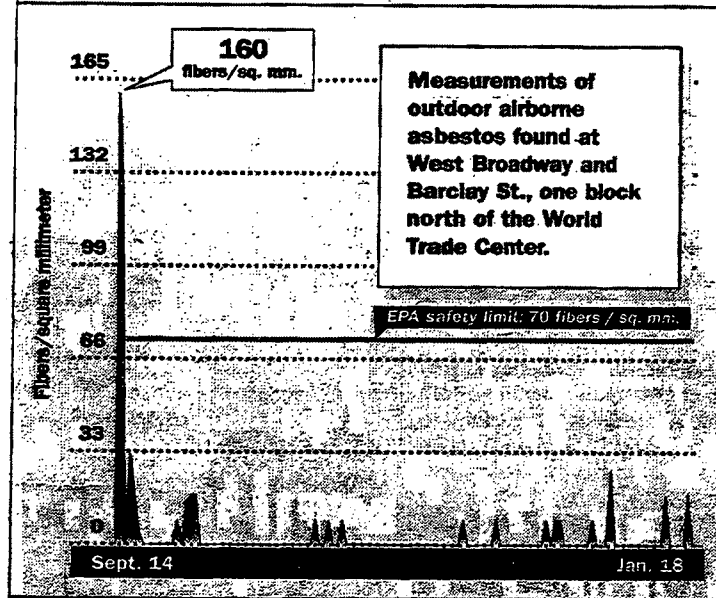
ASBESTOS AT GROUND ZERO

USE A fire-resistant fibrous mineral, asbestos was used in parts of the World Trade Center to insulate steel structural beams before it was banned in 1971 during construction of the twin towers.

TYPES Like 90% of asbestos contained in U.S. buildings, nearly all the substance found at the disaster site was chrysotile — among the least harmful of the six types of asbestos. The most dangerous are amosite and crocidolite asbestos.

RISKS Breathing high levels of asbestos fibers for long periods — usually years — may result in asbestosis, a scarring of lung tissue that can lead to cancer.

LIMITS The Environmental Protection Agency sets a safety limit for asbestos at 70 fibers, or clumps of fibers, per square millimeter of indoor or outdoor air. The Occupational Safety and Health Administration workplace standard is .1 fiber per cubic centimeter of air over an eight-hour period.



"Meanwhile, they're having symptoms. Those two things didn't add up."

The big question

A huge unknown remains: the long-term effects of brief, but intense exposure to a toxic cocktail of PCBs, dioxin, benzene and other known carcinogens.

Could they have combined to cause an assault on the body never seen before?

There's not extensive research on the question, said Patricia Clark, regional administrator of the Occupational Safety and Health Administration. She said OSHA plugged sample numbers from the site into formulas that aim to predict the "additive effect" of multiple toxins, but found nothing of concern.

And what about pregnant women and unborn babies, older people and those with weakened immune systems?

"That's where there is a gap in our knowledge, really," said Dr. Frederica Perera, who is head-

ing a study at Columbia's Center for Children's Environmental Health of pregnant women who were in the area.

"If all these chemicals that were found before didn't go up in the air, they had to go down," said Joel Kupferman, director of the New York Environmental Law and Justice Project. "We believe that they're sitting there in pools of water below surface."

In the meantime, many scientists believe the relative risk to most who live and work in the area should be kept in perspective.

"I've heard people who were covered with dust are living in fear of lung cancer, and it's absolutely ridiculous to be that concerned," Santella said. "But, of course, you can't prove that people aren't going to get sick. That's the other problem. You can't prove a negative."

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