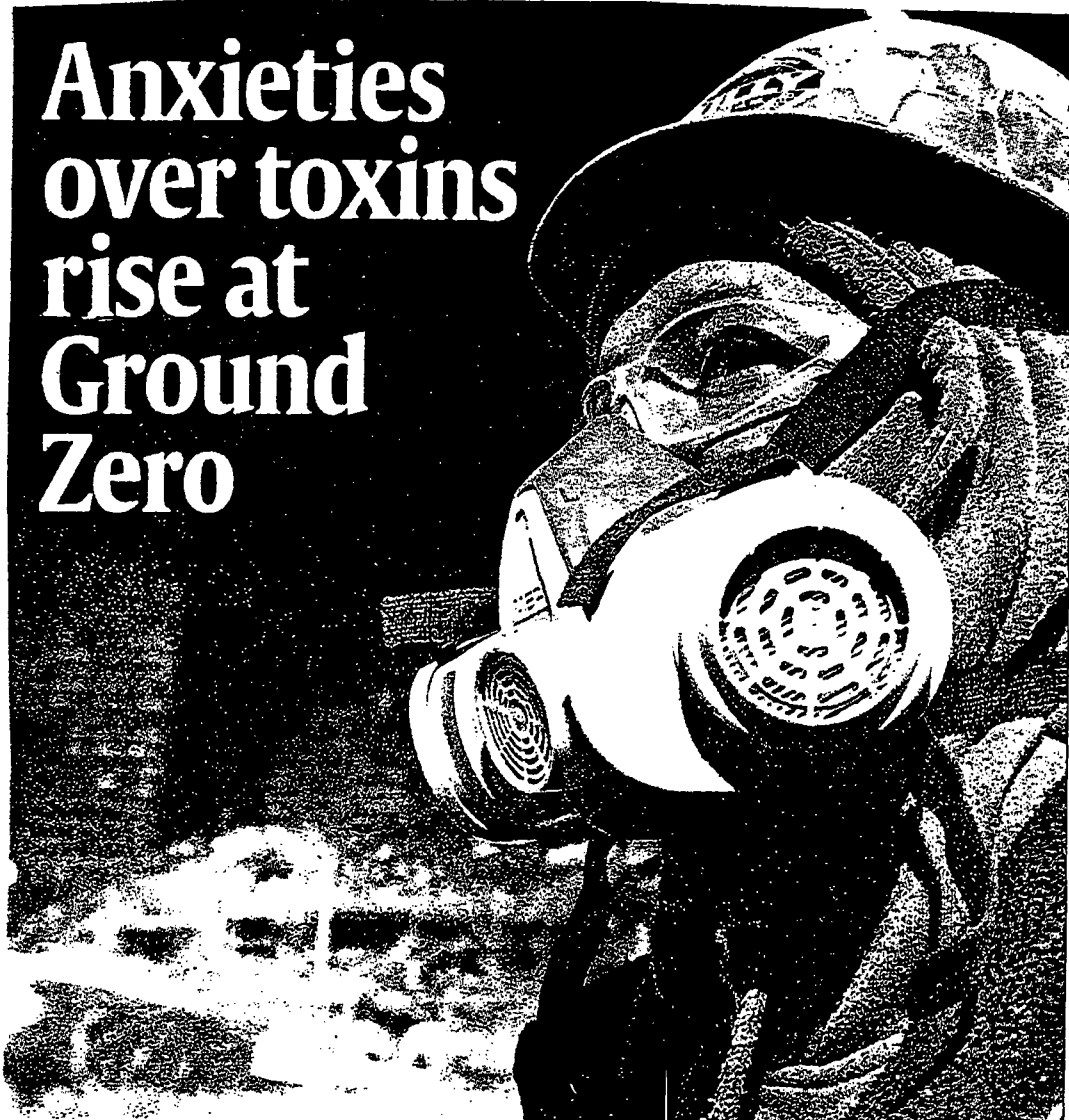


Anxieties over toxins rise at Ground Zero



By Mark Lennihan, AP

Pre-emptive mask: A recovery worker protects himself from possible toxins at the World Trade Center site.

Respiratory ailments persist in residents, workers, students since collapse of twin towers

By Charisse Jones
USA TODAY

NEW YORK — In the neighborhoods closest to the site of the worst terrorist attacks in U.S. history, a new fear has taken hold. Despite assertions by local and federal officials that the air downtown is safe to breathe, many who live and work there remain concerned about toxins such as lead, PCBs and asbestos that the terrorist attacks may have left behind.

Cover story

► Guide to the toxins and the possible health effects. Chart, 6A

Since the attacks Sept. 11, many recovery workers, residents and students downtown have complained of tightness in their chests, bloody noses, sinus infections and other respiratory ailments.

Roughly one in four firefighters who have been working at Ground Zero have what some are calling "World Trade Center cough" or another respiratory complaint, fire department of-

ficials say. About 750 have had to take medical leave, according to the firefighters' union.

Tests of eight Port Authority employees working at Ground Zero showed elevated levels of mercury in their blood. Though no one is certain that working at the site caused the problem, subsequent tests found that the mercury levels of six workers returned to normal after they were reassigned.

Now, the Environmental Protection Agency and local health officials are under fire from politicians and others who accuse them of failing to adequately inform the public about potential long-term health risks from asbestos, heavy metals and various chemicals. They say officials downplayed negative test results of such substances as benzene, dioxins and PCBs and have been slow in releasing test findings to the public.

The EPA disputes those criticisms and says the outdoor air downtown poses no long-term health risks.

The interiors of at least a few buildings, however, were coated with enough asbestos to be subject to EPA rules for asbestos cleanup. A private scientific firm hired by elected officials, for example, found high asbestos levels in dust at

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two apartment buildings near Ground Zero. EPA rules require that any dust or debris containing more than 1% asbestos be handled according to special rules, not just swept up by homeowners.

Though several scientists say it appears that the levels of chemicals were not present in high enough amounts and that exposure was too minimal to cause long-range concerns, many of the

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toxins can have serious effects.

Long-term exposure to many of these substances can cause major health problems. Asbestos can cause cancer. PCBs from electronic components and benzene from burning jet fuel are also carcinogens. Dioxins, particulates released in a fire, can be carcinogenic and cause reproductive problems. Long-term exposure to lead can cause neurological damage. And PBDEs — a flame retardant often found in computers, foam padding and plastics — are likened to PCBs and could also be present.

Critics also say officials have not done sufficient testing inside buildings and have failed to oversee proper cleaning of apartments and businesses. Several community organizations have conducted their own indoor tests and say their findings suggest that the potential health risks are greater than officials have indicated.

Parents and teachers at P.S. 89 went to court to delay last Monday's scheduled reopening of the elementary school in nearby Battery Park City. They were concerned about the air quality and questioned whether the children are ready to return to the area near the Trade Center. School officials are trying to work out a timetable agreeable to the parents.

~~The EPA spokeswoman is investigating whether the agency has been slow releasing test results and whether it knew its asbestos testing might be flawed.~~ Rep. Jerrold Nadler, D-N.Y., has accused the EPA of maintaining a double standard by cleaning its offices six blocks from Ground Zero more thoroughly than it advised others to clean their buildings.

On Monday, Sen. Joe Lieberman, D-Conn., chairman of the Senate clean air subcommittee, will hold a hearing in New York on downtown air quality at the request of Sen. Hillary Rodham Clinton, D-N.Y.

"Because there was absolutely no oversight on the city's part, we don't know what lurks in people's apartments or businesses," says Madelyn Wils, chairwoman of the community's advisory committee.

Wils lives six blocks from the World Trade Center and suffered a sore throat, laryngitis and a sinus infection for a few months after the attacks. "If you washed your walls and didn't clean your drapes, could you have asbestos on your drapes?" she asks. "If you didn't get rid of your children's toys, and they have stuffed animals, could they have asbestos? Probably."

In a survey of Lower Manhattan by the city health department and other agencies in October, 34% of the 414 respondents said they did not feel that their homes were safe to live in. In each of three neighborhoods profiled, roughly 80% of those with safety concerns were worried about air quality, and 35% of those surveyed wanted more information about proper cleaning.

Testing outdoors

The EPA says it has been vigilant in sharing information, meeting with various agencies, regularly updating its Web site and even maintaining a lab near Ground Zero. The lab performs daily tests for toxins and gives the results immediately to workers at the site.

"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.

Many ailments are likely to clear up and can be attributed to the pulverized concrete and fiberglass that filled the air after the twin towers collapsed, as well as the fires that burned at Ground Zero until late December, medical experts say. Though some of the substances unleashed by the disaster are known to be long-term health hazards, "for the most part, people didn't get a high enough or long enough exposure for long-term concerns," says Paul Liroy, associate director of the Environmental and Occupational Health Sciences Institute in Piscataway, N.J.

~~But~~ he adds, "there's enough

anecdotal information out there that some good solid studies need to be done to confirm or deny the effects being observed."

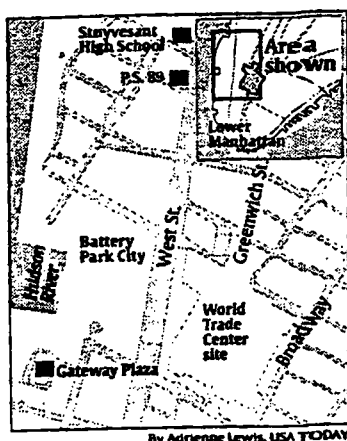
Several studies are underway. Mount Sinai School of Medicine in New York City is examining how substances such as heavy metals, PCBs, dioxins and other pollutants might affect pregnant women. City health officials plan to start a registry of those near Ground Zero during the disaster. The Fire Department is monitoring roughly 11,000 firefighters and emergency technicians who spent time at the site for exposure to substances such as heavy metals and mercury. The EPA also is conducting several studies on exposure and toxicity at and near the site.

Ultimately, any potential risk might depend on the level of exposure and for how long. For example, a worker caught in the first toxic plume on Sept. 11 might develop different health problems than a resident who was away but returned days later to an apartment coated with dust. Scientists are trying to figure out these different health risks.

Part of what makes long-term health predictions so difficult is that several calamities occurred at once on Sept. 11. Jet fuel exploded, office equipment melted in the searing fire and two skyscrapers collapsed, releasing an array of substances that might have combined in unusual ways. "So you have all sorts of things that people never (before) breathed all at the same time, and in quantities that we're just not used to," Liroy says.

The EPA has been checking the air, drinking water and river sediments for asbestos, lead, metals, benzene, dioxin and other substances. Both federal and city officials say there were sporadic spikes in asbestos, particularly right after the attacks, but the levels have decreased over time. City health officials say lead levels have not been higher than what is normally seen in New York City dust. The EPA has taken 283 air samples since September for lead and found only five above the federal

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acceptable standards for adults and children.

Unhealthful levels of dioxins and PCBs measured by the EPA have been concentrated only over Ground Zero, where workers must wear protective equipment while removing debris from the site.

Even so, some residents in the area say they believe that officials were premature in declaring it safe to return to Lower Manhattan shortly after the attacks.

"I don't know if they intentionally misled us, but they seem to have given conflicting statements," resident Dennis Gault says about the EPA. "My concern is for the children in the neighborhood. ... The asbestos, over 20 or 30 years, God knows what will be the effects. And then the PCBs and the heavy metals are also quite frightening."

Testing indoors

On Sept. 11, Gault's wife called him at work. He rushed to their apartment in Gateway Plaza, about 300 yards from the World Trade Center. He shut the windows, then "we put the baby in the stroller, and we ran for our lives."

When Gault returned home a week later, he noticed a dark powder coated the apartment, he recalls. Gault, 36, had to toss away most of the furniture and his 3-year-old daughter's toys. The apartment has been cleaned twice, but a residue remains, he says. "There was no testing of the air in my apartment that I know of, so I don't know what the levels of asbestos were or the other toxins," says Gault, a teacher.

He went back home in December to be closer to his job, while his wife and daughter continue to stay with his in-laws. But he says his family may have to rent another apartment.

"Before they come back, I'd like to have my apartment tested," says Gault, who does not have renter's insurance to cover the costs. "After all the cleaning I've done myself and the cleaning by others, if there's still levels of toxins in here, I'm going to relocate. Be-

cause for a 3-year-old, there is no safe level of toxins."

"I think the problem has moved inside to a lot of buildings," says Joel Kupferman, executive director of the New York Environmental Law and Justice Project. "What we have is many time bombs that are ticking, that only after full testing, monitoring (and) proper cleanup ... will we know if the situation is safe."

One independent industrial hygienist retained by Kupferman's organization took samples at a 52-story apartment complex downtown after the building cleanup began and came up with a reading of 550,000 asbestos fibers per square centimeter. The acceptable limit is 500-1,000 fibers per square centimeter. "It's definitely an in-

dication that there's a high level of asbestos in the building," Kupferman says.

EPA officials say city agencies were in charge of indoor testing in Lower Manhattan. But the EPA still advised that homes and businesses be professionally cleaned.

"We have from the start been clear that what we found on the outside was likely to have gotten inside people's apartments," Bellows 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."

Some people say they want the EPA to step in and oversee the indoor cleanup. Others say the city

has failed to look out for those in Lower Manhattan. "Overall, the responsibility for coordinating environmental response belonged to the city of New York," says Eric Goldstein of the Natural Resources Defense Council.

City health officials say that before any building was reoccupied, landlords were required to properly assess the building's safety. The health department issued an advisory on how to adequately clean building interiors, and the city's Department of Environmental Protection handles any specific concerns about a building.

Then, there are the schools

Another rift has emerged over whether schools remain unsafe.

Seven downtown schools were relocated after Sept. 11, and students have been returning on a staggered schedule after their schools are cleaned and declared safe. Two reopened Monday.

Students at Stuyvesant High School, one of the city's premier high schools, located a few blocks from Ground Zero, went back in October. Some parents say their children have suffered from rashes, nosebleeds and other health problems since returning.

The barge where debris from Ground Zero is being toted each day sits in the Hudson River next to the school, and that continually exposes the students to toxins, parents and environmental activists say.

Fernando Pacifico noticed that his 17-year-old daughter has not been well since returning to Stuyvesant. Since she was a freshman, she had missed about three school days a year. But since October, she has been out six days, sick with a sore throat or headache.

"Basically, they moved the World Trade Center debris right behind the school," says Pacifico, who is a physician.

School board officials say the downtown schools now have thicker ventilation filters. The indoor and outdoor air quality is tested daily.

Nevertheless, school board spokeswoman Catie Marshall concedes that such precautions may not be enough.

"It's easy to test air and find the air contains nothing hazardous," she says. "It's harder to convey that message to people who are nervous."

Lisa Phillips owns an apartment in Tribeca, near the Trade Center site, and lives there with her 2-year-old twins. They moved away briefly after Sept. 11.

Now, she says, the air has largely cleared, though questions remain.

"It's home," Phillips says. "And in such unsettling times, there's comfort in being home, even if home is close to Ground Zero."

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Uncertainty surrounds asbestos

By Traci Watson
USA TODAY

When the World Trade Center collapsed, thousands of tons of asbestos spewed into the air of Lower Manhattan. On this point, nearly everyone agrees.

Beyond that, nothing is simple. In recent months, the asbestos has aroused more fear and blame than any other pollutant in the controversy over air quality near Ground Zero.

The stakes are high. Asbestos does not cause the respiratory and eye problems that many New Yorkers are experiencing, but the microscopic fibers do cause lung cancer.

"I've heard there were nearly 5,000 tons of asbestos released in Manhattan, but (officials say) everything's okay," says Steve Swaney, head of a tenants' group at a downtown apartment building. "I think they should give people the truth."

The truth will be very hard to discern. Few environmental toxins boast the complications of asbestos. "The only thing everyone agrees about is how to spell the word," says Rashad Shaikh, the former head of a research institute devoted to asbestos.

For starters, there's the hit-and-miss monitoring. Officials at the Environmental Protection Agency say city officials took responsibility for whether buildings should be reoccupied. So the EPA restricted its testing to air and dust levels outdoors.

The city has yet to release indoor test results, which could be available as soon as today.

Despite the lack of monitoring, EPA officials started reassuring the public soon after Sept. 11 that asbestos posed no problem. "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," EPA chief Christie Whitman said Sept. 13.

Whitman and other EPA officials neglected to say that the agency tested only outdoors, where air pollution and toxic dust are quickly diluted to harmless levels.

Dozens of private firms have run tests, but the results can be controversial. There are many methods of asbestos testing, and even experts disagree over which should be used.

However, it is clear that the interiors of at least a few buildings are coated with enough asbestos to be subject to EPA rules for asbestos cleanup. Those rules apply to dust or debris containing more than 1% asbestos. If kicked up by activity, that dust could easily be inhaled.

A private scientific firm hired by elected officials found up to 79,000 of the most dangerous types of asbestos fibers per square centimeter in the dust in an apartment near Ground Zero. "These dust numbers are extraordinary," says Richard Lee, president of RJLee Group, a materials lab and consulting firm. "I think you'd have to recommend, based on (these) numbers, that these be professionally cleaned."

A second firm hired by a construction company found high levels of asbestos in the air in several large office buildings near the Trade Center site.

Such buildings should be cleaned by specialists, Lee said. Ill-equipped cleaners could be exposed to high levels of asbestos. And even one-time doses of asbestos, if large enough, can raise the risk of mesothelioma, a rare cancer.

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Possible pollutants near Ground Zero

The Environmental Protection Agency says toxins in the outdoor air near the World Trade Center site since Sept. 11 generally have not exceeded federal standards. However, many residents say they believe that more testing needs to be done, particularly indoors. Some of the pollutants found in the area and possible health effects of long-term exposure:

Substance	Source	Health risks	The debate
Asbestos	Used in insulation and floor tile at the World Trade Center.	Long-term exposure can cause lung cancer and other cancers.	Of 5,559 EPA outdoor air samples taken, 31 were above federal standards; only four of those were taken after Sept. 30. But private tests found high levels inside buildings.
Benzene	Found in jet fuel, plastics and many other products.	Long-term exposure can cause anemia and leukemia.	Air samples away from Ground Zero have been below EPA's screening level.
Lead	Found in old paint; also released by burning debris.	Long-term exposure can cause neurological damage.	City health officials say levels are no higher than normal in New York City dust. Of 283 samples, five were above federal standard.
PCBs	Coolants and lubricants used until the late 1970s in electrical equipment and fluorescent lights.	Long-term exposure might cause cancer.	All samples tested below EPA levels that require removal.
PBDEs	A flame retardant used in upholstery, plastics and computers.	Long-term health effects unclear. There is concern it may cause learning and memory loss in children.	EPA did not sample for this chemical because there is no benchmark. One form of PBDEs will be banned next year in Europe.
Mercury	Used in thermostats, fluorescent lamps and computers; emitted by most power plants.	Can cause birth defects, neurological damage.	EPA found levels to be either insignificant or undetectable. But eight Port Authority workers had elevated levels in their blood; six returned to normal after being reassigned.
Dioxins	Particles released during burning of fuel and other materials.	Long-term exposure might cause cancer and reproductive problems.	Of 230 samples, four were higher than federal standards.

Sources: EPA; USA TODAY research

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