



Associated Press

Dr. John Agwunobi answers questions about the investigation in Palm Beach County at a press conference. Some experts say too few public health officials have been willing to talk to the press.

nica agent that might have been released. After anthrax was detected in Florida, the epidemic service, which is based at the Centers for Disease Control and Prevention in Atlanta, set out to determine how the patient contracted the disease. The information is crucial in assessing the potential harm to other people.

The second front is informing the public of the anthrax cases, the steps the C.D.C. is taking to combat the threat to public health, and what people can do.

Much of the detection effort went well, though there were disturbing glitches like a power failure at the C.D.C. that delayed the

But many experts have criticized the C.D.C. for remaining largely silent about the anthrax threat instead of providing more detailed information sooner to people who may have been exposed as well as to doctors and the public.

C.D.C. spokesmen have said they were restricted in disclosing information because of provisions of the Federal Emergency Response Act and because the F.B.I. was conducting a criminal investigation.

That was so, said the C.D.C. director, Dr. Jeffrey P. Koplan, even though the centers

Continued on Page 7

After Attacks, Studies of Dust and Its Effects

By ANDREW C. REVKIN

Despite a steady stream of data from public agencies showing that the stubborn, eye-stinging plumes of dust from the wrecked World Trade Center pose few risks, thousands of people — residents and workers in nearby neighborhoods, firefighters, demolition crews, those who fled the attacks — say they still fear for their health.

It's no wonder, given the images of volcano-size clouds and ghostly coatings of white dust that are etched in the collective memory of the attacks. And an alphabet soup of federal, state and city agencies have issued confusing information on Web sites or in press releases — particularly about asbestos, which was used in building one of the towers and whose fibers can cause cancer.

Different agencies used different standards and measurements when describing the levels of this mineral in air and dust. Private testing firms, in a few samples, used yet another set of methods and, not surprisingly, produced different results.

After the rush of emergency responses and hasty testing done in a crisis, dozens of scientists from universities, medical schools and private firms have begun an intensive search for any lingering medical effects from the attacks.

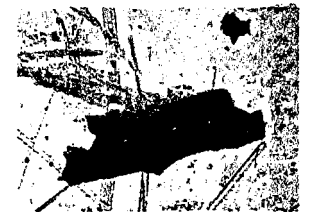
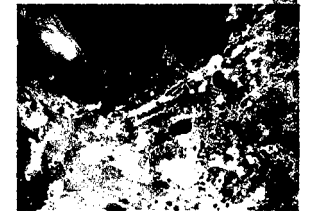
Some laboratories are testing soot filtered from the air to see if it contains any unusually toxic ingredients, like metals or dioxins. Others are teasing out the microscopic contents of dust scooped from sills, floors and rubble heaps in downtown Manhattan.

In the meantime, public health experts are drawing up plans to recruit some of the hundreds of pregnant women they estimate were among the tens of thousands of people at or near ground zero the morning of Sept. 11. Their goal is to closely monitor maternal, fetal and child health, looking for any



Piotr Chmielinski/HP Environmental

Dr. R. Hugh Granger of HP Environmental takes dust samples from a building several blocks north of the World Trade Center. Below, dust under a microscope: chrysotile asbestos, top, and a charred wood fragment.



Images by MVA Inc.

hints of problems that may be related to exposure to the fumes and dust. And scientists are sifting through the environmental tests done by a host of public agencies to translate the flood of data into something less confusing to residents and workers.

For the moment, almost all of the independent research jibes with the core finding of federal, state and city health and environmental officials: that only people working for a prolonged period in the 16-acre attack site face a significant health risk, and then only if they are not wearing protective masks and clothing. Outside that zone, there is little chance of significant harm, they say.

But many of the scientists involved in the studies say it is important to probe deeper, both by analyzing the substances released in the fires and collapses and by monitoring the health of people exposed to them.

"We have not yet seen anything that would tell you it's dangerous, but we don't know everything yet," said Dr. George D. Thurston, a professor of environmental medicine at the New York University School of Medicine, which is analyzing dust and soot from the trade center in a laboratory in Sterling Forest, in Tuxedo, N.Y. "We're not

Continued on Page 2

After Terrorist Attacks, Studies o

Continued From First Science Page

content with just saying that because it's within the standard that means everything's fine, let's go back and live our lives," Dr. Thurston said. "We're saying this is not the end of things. This is the beginning. We're going to follow these populations."

Much of the work is taking place at half a dozen universities and medical schools around New York that have research centers operating under the auspices of the National Institute of Environmental Health Sciences. Other tests of the smoke and dust are being done by private laboratories hired by companies overseeing the demolition, to ensure that their workers are safe.

Separate long-term health studies are being undertaken by New York City's Fire Department, which sent almost every one of its 11,000 firefighters and 3,500 emergency medical technicians to the attack site in the first week.

The Centers for Disease Control and Prevention provided a \$5 million grant last week to help city and state officials monitor air quality in Lower Manhattan, test the air in private homes and offices, track mold and pollen counts in the area to assess their relative contribution to any breathing problems and examine hospital records to see if asthma or other respiratory ailments rose after the attacks. (So far, the only reporting is anecdotal, and it shows no discernible increase in asthma.)

Some of the money would be focused on preventing and treating asthma, which reached epidemic proportions in New York in the late 1990's, particularly among poor children. "We must make sure asthma patients are cared for properly in the aftermath of the World Trade Center attacks," the health and human services secretary, Tommy G. Thompson, said last week.

Many of the researchers involved in the independent follow-up studies say their goal is not just to create a clearer picture of where any real risks lie, but also to get the message across to exposed residents and workers who have been confused and worried for weeks.

"If I were a member of the general public, I would probably be scratching my head right now," said Dr. Paul J. Liroy, the associate director of the Environmental and Occupational Health Sciences Institute in Piscataway, N.J., which is involved in the effort.

With asbestos, some of the confusion exists because federal environ-



Ozler Muhammad/The New York Times

Shao-I Hsu, a graduate student in environmental medicine, collecting data on air quality at Hunter College's Brookdale Campus in New York.



Nancy Siesel/The New York Times

New York firefighters who were at the World Trade Center site, including Barry Albrecht, are being tested for the effects of dust.

mental and labor agencies and city officials use different standards and tests to estimate risks.

"There's so much information out there in different forms," said Laura Hemminger, co-director of community outreach for the New Jersey program. "We need to compile it and put it together in a way that people can understand — and not just the public, but health care providers, too."

She said the basic information on how to deal with dust would continue to be important for months to come. "As the cleanup process goes on, more dust and debris will be kicked up, so it's important for people to know how to keep their exposure reduced," she said.

The New Jersey program has created a Web site (www.eohsi.rutgers.edu/rc/response.shtml) to communicate findings, along with information on how to limit contact with dust, as a common-sense precaution.

Along with the Web site, Ms. Hemminger and other environmental health experts in the New York region are organizing meetings for residents concerned about possible health problems related to the attack. The next meeting will be at 7:30 p.m. Thursday in New York University's main building, at 24 Waverly Place.

Firefighters should provide a good baseline for monitoring health problems related to the building collapses because their health was already well monitored beforehand, department medical officials said. So far, department doctors have taken chest X-rays and blood samples and

f Dust and Its Effects

checked for breathing problems in 400 firefighters. But officials say that for the moment they do not have the money to do the same for every firefighter who went to the site.

The 400 firefighters in the initial project are broken into four groups: those exposed to large amounts of smoke in the moments before the towers collapsed, those who arrived after the collapse, some who were on the scene in the first week and a group who for various reasons had minimal exposure.

By comparing their long-term health and details of their exposure, the department will be able to determine whether the emissions from the wreckage contained any unusually toxic ingredients, said Dr. Kerry Kelly, the chief medical officer for the Fire Department.

Separately, tests commissioned by construction companies and building owners have begun to reveal the ingredients in the dust and smoke.

Tests conducted by HP Environmental, MVA Inc. and other commercial laboratories have isolated fragments of ceiling tile, carpet fibers, paper, hair and concrete pounded so fine that embedded crystals, formed when it hardened, came unglued.

"That's something you rarely see on its own," said Dr. James R. Millette, the executive director of MVA Inc., in Norcross, Ga. The private tests have produced new evidence that the extraordinary force of the building collapses pulverized materials into unusually fine motes — including asbestos fibers.

Dr. Millette said about 10 percent of a typical dust sample was the finest powderlike particles. In the samples from around the attack site, at least 30 percent of the dust was the finest material.

A few air samples collected by scientists from HV Environmental in buildings two to four blocks north of the trade center held traces of asbestos fibers, many of which were broken into unusually minute bits that probably pose less of a health threat than long fibers but which, in their abundance, still pose some risks, scientists say.

Over all, researchers have persistently found only a few samples outside the blocks directly adjacent to the trade center with asbestos amounts topping various safety standards.

At N.Y.U.'s laboratory, researchers are testing soot collected in filters on rooftops in Lower Manhattan. In one case, the sampling has been under way since November, providing a clear view of any changes in air

quality. But the results of tests for organic compounds, including dioxins, will not be known for at least a few more weeks, university scientists said.

Dr. Lioy says the New Jersey environmental institute is also studying dust samples, with some of the material sent to nine different laboratories for special tests.

Any risk from exposure will eventually become clear, he said. "Over time," he said, "you've had a whole host of people who may have been exposed not only to different levels, but the character of the exposure changed. First you had the workers scattered and enveloped in the dust, then the glorious firefighters, the volunteers, then people downwind in

Looking for hidden perils in the ash and dust of the disaster.

Battery Park City or Brooklyn.

"We don't quite know the whole picture yet, but it's something we have to learn."

The Environmental Protection Agency has separately been testing the persistent smoke plumes rising from the smoldering wreckage, and has found no signs of dioxins, PCB's or other toxic organic compounds, agency officials said.

For the moment, efforts to enlist pregnant women in a long-term health study remain in the planning stage, said Dr. Phillip J. Landrigan, the director of the Center for Children's Health and the Environment at Mount Sinai School of Medicine.

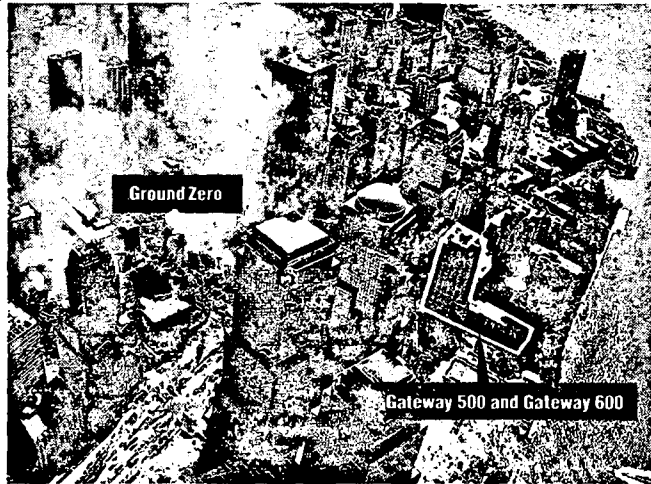
Organizers plan to send letters to every obstetric practice in New York City and its suburbs encouraging doctors to ask women to participate, he said. The medical school will also set up a testing and examination center at the attack site to monitor the health of construction workers and investigators who have settled in for months.

In the end, many health experts echoed the opinion of Dr. Landrigan, who said that ultimately it was people working at the site who needed to be most careful about limiting exposure and keeping track of health problems.

"Someone who was just there for a few hours on the 11th and had minimal contact with dust since then may have some minute elevation of risk," he said. "But it would be imperceptibly small."

Access Denied

Residents have been allowed to move back into all buildings in Battery Park City except Gateway 500 and Gateway 600. It is not known when they will be reopened.



AP Photo

Newsday / Justin Gilbert

Some Neighbors Still Homeless

Battery Park City tenants wait for word

By Roni Rabin

STAFF WRITER

Alastair Onglingswan doesn't like to complain — he knows he's one of the lucky ones. But his Gateway Plaza studio apartment in Battery Park City looks like Pompeii, he's running out of clothes and he's been sleeping on couches since Sept. 11.

Gateway Plaza, which has 1,712 apartments in five residential buildings along with a sixth commercial building, is the only section of Battery Park City that has yet to be opened for reoccupation. Though most services have been restored, confusion was the order of the day, and it was still not clear yesterday when the Gateway section would be rehabilitated.

"We know the city is overburdened with the rescue and now recovery effort. But being left in the dark now is really taking a toll," said Onglingswan, 33, whose apartment is in Gateway 500, on 385 South End Ave.

"It would be great if someone would say, 'Look, you're at Ground Zero, you should expect it to take three months.' But no one's making that determination."

Part of the confusion is rooted in the Gordian knot of landlords and city, state and federal agencies that are all jointly involved in clearing the area for rehabilitation.

Yesterday, for example, Gateway Plaza manager Jamie Lefrak indicated most apartments could be reoccupied and the only holdup was the lack of approval by the city's Office of Emergency Management and the Department of Environmental Protection. Yet DEP Chief of Staff Charles Sturcken said the landlord had yet to complete a cleanup operation. The cleanup was stalled, Lefrak explained, because resi-

dents insisted on being present during the maintenance work, having heard that some apartments had been ransacked.

Going home isn't the only question on Gateway residents' minds. Pregnant women and families with children are concerned about air quality. Onglingswan said he gets headaches every time he stops by his apartment to pick things up. And despite repeated assurances by city and federal environmental agencies, some residents wonder whether their proximity to Ground Zero devastation will be detrimental to their physical or mental health.

The concern over Battery Park City may be reflected in the rate of return of tenants: Only 61 percent of the occupants of north Battery Park City, which reopened Sept. 21, have returned home, and a mere 36 percent of south Battery Park City residents have come home, according to Battery Park City Authority president Tim Carey. The local supermarket just reopened and ground transportation has been limited.

Though a shuttle bus from the Bowling Green subway to the southern end of Battery Park City has been introduced, and the M20 bus route has extended a spur into the northern neighborhood, cars, buses and taxis are still banned.

Right now the hurdle we must get over is access," said Carey, who predicted it could take several months before residents of the most severely damaged Gateway 600 building return home. "We have problems with access for child care, and access for home health care."

But, Carey said, he was optimistic. "They had a moving van there [in Battery Park City] yesterday," he said. "I assumed people were moving out. They were moving in."

WAITING FOR WAR

Air near Ground Zero is rated safe by feds

By PAUL H.B. SHIN
DAILY NEWS STAFF WRITER

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

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

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

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

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

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

Can scar lungs

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

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

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

And asbestos is not the only hazard, he said.

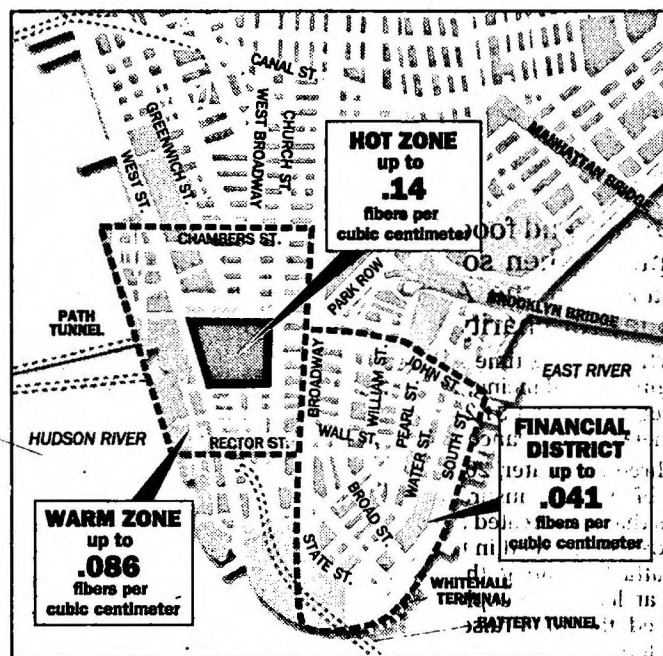
"Even in the absence of toxic components, the dust poses respiratory hazards, particularly to people with pre-existing respiratory conditions such as asthma or bronchitis," Newman said.

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

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

BY THE NUMBERS

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



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

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

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

A NATION CHALLENGED: The Aftermath in New York

THE AIR QUALITY

Contaminants Below Levels
For Long-Term ConcernsBy KIRK JOHNSON
with ANDREW C. REVKIN

The quality of the air has become a matter of widespread anxiety among people who live or work in Lower Manhattan — anxiety compounded in many cases by open disbelief in assurances from government and public health officials that the air, while acrid and sometimes smelly, is generally safe to breathe.

Local residents and workers in downtown buildings say they fear that burning eyes, runny noses and scratchy throats — common maladies below 14th Street, especially at night — could be an indicator of something worse that is not being measured at all. For many people, the plume of dust and smoke that continues to be a presence downtown has become part of the nightmare itself: in an altered New York, even the air, it seems, is no longer what it was.

But independent testing by a company hired by The New York Times has concluded that the outdoor street level air in the vicinity of the trade center site does not contain poisons or toxic substances, especially lead and asbestos, in levels sufficient to raise long-term public health concern. The results, according to the report by Adelaide Associates of Brewster, N.Y., essentially mirrored the findings that have been reached and widely reported by the federal Environmental Protection Agency.

"Adelaide's conclusions support the E.P.A. and New York City claims that there are no significant health risks," the report said.

"Adelaide sampled air for asbestos and lead and fine particle dust and found that, in all three categories, levels were below the federal government's health standards. One of the company's four monitoring stations, at the corner of Rector and Greenwich, exceeded the E.P.A.'s safety standard for asbestos, but was below the standards set by the Occupational Safety and Health Administration. Air testing, how it works and what it reveals or does not, has become part of the uneasy fabric of life in the areas around the disaster site. And health experts stress that the risks to workers directly at the ground zero cleanup site are genuine. Respiratory protection for cleanup crews, physicians say, remains essential.

Volatile organic compounds like benzene, for example, have been measured directly in the smoke plume

itself, but disperse so quickly into the environment that sensors a block or two away show no measurement at all.

But the experts also say that the raging, often emotional debate about air issues downtown, many of them revolving around the question of asbestos, have left many residents deeply misinformed about the relative risks of exposure that they do face every day. And government tests that turn up negative do not seem to explain everything, either. Why, for example, does the air these days make a person's throat feel so raw and ragged?

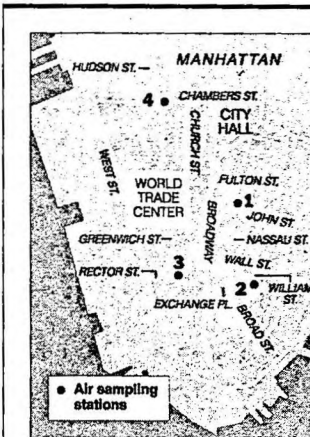
Health experts say there are also many unknowns about the exact mixture of elements that people were exposed to in the early days after the attacks, when the smoke and dust were at their worst. Some predict that there could be more cases of asthma in the city over time, though most say that one-time exposures, even if severe, are generally shrugged off by the body. Different ways of measuring asbestos have also raised concerns that the government tests do not pick up supersmall particles of asbestos fibers that might be dangerous.

But the results obtained by The Times, and interviews with independent health experts around the country and at the E.P.A., also suggest strongly that emotion and anxiety have elevated concerns about the air far beyond the levels shared by most scientists and public health experts.

"There's little risk to the general public of any ongoing air pollution related to the World Trade Center," said Patrick L. Kinney, an associate professor of environmental health sciences at Columbia University, who has monitored air testing results and was briefed about Adelaide's findings.

Professor Kinney and other experts say that the raw throats and sinuses that many residents and workers complain about are in fact mostly evidence of the body's defensive systems. Large particles of dust that get trapped in nasal and throat passages trigger irritation, but that also means that most of the particles are not making it all the way to the lungs.

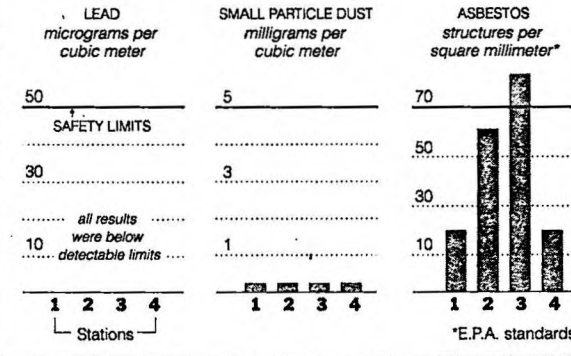
Smaller particles, called respirable dust, which can penetrate deeply into the lungs and are a greater health concern, were not found in significant quantities at street level



Source: Adelaide Associates, LLC

Air Quality Readings

Results of safety tests at four stations downtown.



The New York Times



Nicole Bengiveno/The New York Times

An environmental scientist removing an air quality sample from an Environmental Protection Agency station near Pine and William Streets. Downtown residents are worried about what they may be breathing.

by Adelaide, which also confirms recent government tests.

Other concerns have been raised about supersmall particles of asbestos. Recent news reports have suggested, for example, that the smallest asbestos fibers, smashed into tiny pieces by the cataclysm when the twin towers collapsed, could be more dangerous than the 0.5 micron-and-larger size that are measured by the

E.P.A. and most testing organizations, including Adelaide.

Scientists say that there is genuine debate on that point, but that by an overwhelming number, studies on asbestos exposure have found the larger particles to be far more dangerous because they tend to embed themselves in lung tissue. Smaller fibers, though they can penetrate more deeply into lungs, can also be

more readily attacked and removed by the body's internal defenses, most studies say.

Other impressions by residents do have a basis in science, environmental experts said. For example, there appears to be a tendency for the smell and air quality to worsen at night, and this is consistent with the way air circulates in the city, said Dr. George D. Thurston, an associate

professor of environmental medicine at the New York University School of Medicine, who is involved in a study analyzing the constituents in dust and soot.

He said winds that tend to sweep pollution away during the day generally ebb at night. He also said that as pavement and buildings cool at night, there are fewer updrafts of warm air that stir the atmosphere and blend clear air from higher elevations with dirtier air near the streets.

The result, he said, is that the faint persistent plume of emissions from the attack site "is sort of prowling the city overnight, meandering. And that's what they're smelling."

He, too, agreed with the authorities that there was no sign of a clear health risk to residents, but he quickly added that "prudent avoidance remains the best approach for any resident or worker downtown."

"It's a basic public health principle," Dr. Thurston said. "If you can avoid an exposure, you do so."

Peter M. Iwanowicz, the director of environmental health for the American Lung Association of New York State, said his organization had been receiving calls from a steady string of residents unnerved by the persistently acrid air.

"The visceral human reaction to this is, this smell is not natural, so there must be something wrong, something toxic," he said. But, he added, smells can be a red herring: "Take a skunk. What it lets loose is pretty noxious, but it won't hurt you. Compare that to carbon monoxide, which is odorless and can kill you."

Over all, he said, the lung association still tends to agree with public officials that any threat is limited to possible aggravation of breathing problems in people prone to asthma or other respiratory ailments.

Other experts say there may be other air issues yet to emerge. Altered traffic patterns and increased congestion from heightened security at the city's bridge's and tunnels, for example, have created long lines of idling vehicles, which pollute the air far more than cars and trucks moving on the highways. Exhaust from gasoline-fired electricity generators and diesel vehicles involved in the cleanup are another issue should be monitored over time, they say.

But raw throats and sore eyes, one environmental expert said, should generally be likened to the effect of sitting by a campfire.

"If the smoke gets in your eyes, they burn, but it doesn't mean you're going to go blind," said Donald R. Blake, a professor of chemistry at the University of California at Irvine. "This is a tough thing that people in New York are dealing with," he said. "But we're talking here about a short-term issue."

WAITING FOR WAR

Air near Ground Zero is rated safe by feds

By PAUL H.B. SHIN
DAILY NEWS STAFF WRITER

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

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

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

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

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

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

Can scar lungs

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

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

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

And asbestos is not the only hazard, he said.

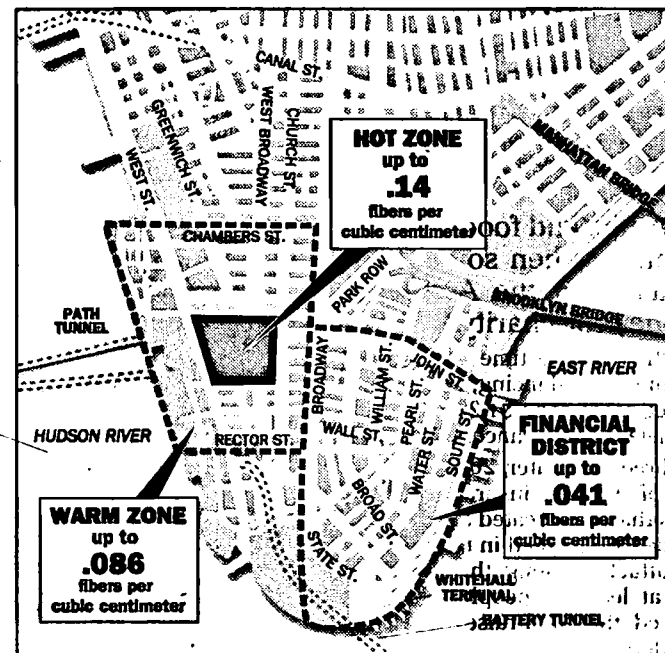
"Even in the absence of toxic components, the dust poses respiratory hazards, particularly to people with pre-existing respiratory conditions such as asthma or bronchitis," Newman said.

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

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

BY THE NUMBERS

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



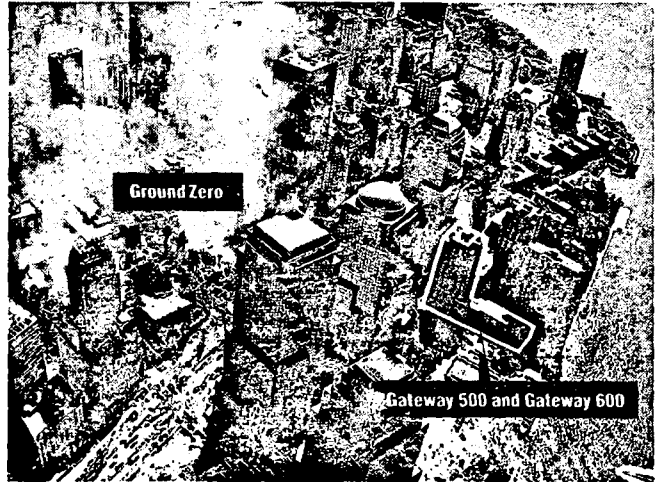
Hot Zone (rubble pile)
OSHA took 72 samples in the hot zone. 90% to 95% of the fibers found were fiberglass rather than asbestos.

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

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

Access Denied

Residents have been allowed to move back into all buildings in Battery Park City except Gateway 500 and Gateway 600. It is not known when they will be reopened.



AP Photo

Newsday / Justin Gilbert

Some Neighbors Still Homeless

Battery Park City tenants wait for word

By Roni Rabin

STAFF WRITER

Alastair Onglingswan doesn't like to complain — he knows he's one of the lucky ones. But his Gateway Plaza studio apartment in Battery Park City looks like Pompeii, he's running out of clothes and he's been sleeping on couches since Sept. 11.

Gateway Plaza, which has 1,712 apartments in five residential buildings along with a sixth commercial building, is the only section of Battery Park City that has yet to be opened for reoccupation. Though most services have been restored, confusion was the order of the day, and it was still not clear yesterday when the Gateway section would be rehabilitated.

"We know the city is overburdened with the rescue and now recovery effort. But being left in the dark now is really taking a toll," said Onglingswan, 33, whose apartment is in Gateway 500, on 385 South End Ave.

"It would be great if someone would say, 'Look, you're at Ground Zero, you should expect it to take three months.' But no one's making that determination."

Part of the confusion is rooted in the Gordian knot of landlords and city, state and federal agencies that are all jointly involved in clearing the area for rehabilitation.

Yesterday, for example, Gateway Plaza manager Jamie Lefrak indicated most apartments could be reoccupied and the only holdup was the lack of approval by the city's Office of Emergency Management and the Department of Environmental Protection. Yet DEP Chief of Staff Charles Sturcken said the landlord had yet to complete a cleanup operation. The cleanup was stalled, Lefrak explained, because resi-

dents insisted on being present during the maintenance work, having heard that some apartments had been ransacked.

Going home isn't the only question on Gateway residents' minds. Pregnant women and families with children are concerned about air quality. Onglingswan said he gets headaches every time he stops by his apartment to pick things up. And despite repeated assurances by city and federal environmental agencies, some residents wonder whether their proximity to Ground Zero devastation will be detrimental to their physical or mental health.

The concern over Battery Park City may be reflected in the rate of return of tenants: Only 61 percent of the occupants of north Battery Park City, which reopened Sept. 21, have returned home, and a mere 36 percent of south Battery Park City residents have come home, according to Battery Park City Authority president Tim Carey. The local supermarket just reopened and ground transportation has been limited.

Though a shuttle bus from the Bowling Green subway to the southern end of Battery Park City has been introduced, and the M20 bus route has extended a spur into the northern neighborhood, cars, buses and taxis are still banned.

"Right now the hurdle we must get over is access," said Carey, who predicted it could take several months before residents of the most severely damaged Gateway 600 building return home. "We have problems with access for child care, and access for home health care."

But, Carey said, he was optimistic. "They had a moving van there [in Battery Park City] yesterday," he said. "I assumed people were moving out. They were moving in."

"Even on the worst air days in Beijing, downwind from coal-fired power plants, or in the Kuwaiti oil fires, we did not see these levels of very fine particulates," Cahill said. The amounts of very fine particles, particularly very fine silicon, decreased sharply during the month of October.

Coarse particles

Similar to the high concentrations of very fine particles, virtually all the air samples from the trade center site carried high concentrations of coarse particles—those about 12 micrometers to 5 micrometers in diameter.

"These particles simply should not be there," Cahill said. "It had rained, sometimes heavily, on six days in the prior three weeks. That rain should have settled these coarse particles." The finding suggests that coarse particles were being continually generated from the hot debris pile. This observation is at least qualitatively supported, for while they are still being analyzed, the coarse particles appear to be coated with combustion products, including soot, Cahill said.

Metals

Many different metals were found in the samples of very fine particles, and some were found at the highest levels ever recorded in air in the United States.

However, there are few established safety guidelines for airborne metals. One metal for which there is a guideline, lead, was present at low levels in fine and very fine particles.

Some of the metals for which there are no guidelines that were present in very fine particles in relatively high concentrations were iron, titanium (some associated with powdered concrete), vanadium and nickel (often associated with fuel-oil combustion), copper and zinc. Mercury was seen occasionally in fine particles but at low concentrations. Many of those metals are widely used in building construction, wiring and plumbing. Some are common in computers.

The metal content of the coarse particles is still being analyzed.

Asbestos and glass

Although some asbestos was used in the buildings for fireproofing and in floor tiles, and the DELTA group checked for it carefully using the electron microscope, they found very few asbestos fibers, even in the very fine particles.

Some particles that appeared to be glass were seen, but they were not in the form of long shards, which can mimic asbestos fibers.

Clean-up recommendations

All evidence indicates that ambient air in New York City now is little influenced by the World Trade Center collapse, especially since the fires are out and the debris pile has cooled.

However, the presence of large amounts of very fine particles as late as October means that indoor clean up should be done carefully, Cahill said. Very fine particles will have penetrated crevices and fabrics in a way normal dust doesn't. And they are easily re-suspended, which re-exposes the room's occupants to them.

Cahill strongly supports the recommendations made by the New York Department of Health regarding washing with water, and said:

- Don't use vacuum cleaners or brooms because they re-suspend particles. Do use wet rags, mops and wet-vacuum-type cleaners.
- Wipe all surfaces, including window blinds, picture tops and door frames, with wet rags.
- Drapes and curtains should be washed or dry-cleaned. Furniture fabrics should be steam-cleaned. Carpets should be wet-cleaned.
- Use high efficiency electrostatic or HEPA air filters in furnaces and air conditioners.
- Keep humidity reasonably high indoors, to keep very fine particles from floating around.

UC Davis DELTA Group