

9/11 Dust Seen As Less Toxic Than Feared

Scientist Says Exposure May Not Be Significant

By ANDY NEWMAN

The soot in the air of Lower Manhattan in the first few days after the Sept. 11 attack was less likely to cause cancer and other long-term health problems than many had feared, according to a report released yesterday.

The report, by a team of environmental scientists studying the pollution caused by the burning and collapse of the World Trade Center towers, found that dust particles collected at 14 sites from Sept. 12 through 14, 2001, were primarily larger than those much more dangerous particles that are more likely to lodge deeply in the lungs and stay there. The larger particles are more easily expelled.

"That means," said Paul Lioy, one of the authors of the study, "in terms of potential lifetime exposures, we're probably going to be very lucky in that these may not be exposures of significant health risk."

The degree of environmental risk caused by the destruction of the towers has been the subject of clamorous debate since before the dust even settled.

Many rescue workers and nearby residents have complained of respiratory problems and have accused the authorities of withholding information. The federal Envi-

*Most particles were of
an easily expelled type, a
study says.*

ronmental Protection Agency took the unusual step this year of promising to clean up and test apartments in the entire area south of Canal Street.

The study is to be published in the February issue of Environmental Science & Technology, a peer-reviewed journal of the American Chemical Society, which is a scientific and not an industry-sponsored group. The report is available on the society's Web site at www.acs.org.

Dr. Lioy, the associate director of the Environmental and Occupational Health Sciences Institute, which is affiliated with Rutgers University, cautioned that the study did not determine how much of various particles people may have inhaled near ground zero.

But Dr. Lioy said it was a positive sign that the finer particles — those smaller than 2.5 millionths of a meter — appeared to have made up less than 1 percent by weight of the million or so tons of dust produced by the disaster. In normal air, he said, fine particles make up 20 percent to 30 percent of the total mass of particulates.

But Peter Montague, the director of the Environmental Research Foundation, a public-interest group based in New Brunswick, N.J., said that the quantity of fine particles remained troubling.

"One percent of a million tons is 10,000 tons," he said. "So you've got 10,000 tons of

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fine particles. That's a lot."

Mr. Montague also noted that the study reported on the relative concentration of fine particles in the dust that settled, not the dust in the air. Smaller particles would be more likely to remain airborne, he said.

Mr. Montague said the same team of scientists had published an earlier finding that there were "significant ambient levels" of compounds similar to polychlorinated biphenyls, or PCB's, in the first day after the attack. PCB's have been linked to cancer. "Everyone who breathed this

stuff should continue to have their health checked, because no one really knows what was in it," he said.

Dr. Liroy said that larger particles, particularly pulverized concrete and glass, were likely most responsible for the "World Trade Center cough" that many people have reported. Smaller particles, he said, were more likely to cause cancer, emphysema and other long-range problems.

The compounds analyzed in this study, known as polycyclic aromatic hydrocarbons, are the products of incomplete combustion. They include fluorene and pyrene.

The relative prevalence of larger

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particles, Dr. Liroy said, was probably due to the wide variety of conditions in the various fires. "This was just mass chaos, and the fire was a chaotic fire," he said. "You would not expect anything consistent in terms of the nature of the burn."

Most of the dust samples were collected within a couple of blocks of the World Trade Center. Two were collected from atop cars about half a mile east, on Market Street near the East River.

Across the East River, in Brooklyn, many people have complained that the pollution that drifted into Brooklyn from the disaster has not been sufficiently studied. Dr. Liroy said he regretted that no samples had been taken from Brooklyn immediately after 9/11, but he added that there was no reason to believe the composition of dust in Brooklyn would be much different from the dust nearer the site.

