Staff: Christian Hylton,
Counsel to the Committee

Judith MacFarlane,
Counsel to the Committee

Gelvina Stevenson,
Counsel to the Committee

Frank Neely,
Policy Analyst to the
Committee

David Pristin,
Policy Analyst to the
Committee

Chris Read,
Policy Analyst to the
Committee

The Council

Briefing Paper of the Infrastructure Division and Human Services Division

Marcel Van Ooyen, Deputy Chief of Staff and Director
Catherine Torres, Deputy Chief of Staff and Director

Select Committee on Lower Manhattan Redevelopment
Hon. Alan J. Gerson, Chair

Committee on Health
Hon. Christine Quinn, Chair

March 29, 2004

Oversight hearing: Air Quality in New York City following 9/11

On Monday March 29, 2004, the Select Committee on Lower Manhattan Redevelopment, chaired by Council Member Alan J. Gerson, and the Committee on Health, chaired by Council Member Christine Quinn, will hold a hearing regarding the air quality in New York City during the days, weeks and months that followed the WTC terrorist attacks of September 11, 2001. The Committees will focus on "EPA's Response to Exterior Air Quality after 9/11", "EPA/NYCDEP/NYCDOH Response to Interior Air Quality after 9/11" and "Illnesses and disabilities associated with 9/11".

I. EPA's Response to Exterior Air Quality After 9/11.

The terrorist attack on New York City's World Trade Center, on September 11, 2001, created an unprecedented environmental disaster, especially in Lower Manhattan and many areas of Brooklyn. The collapse of the Center's twin towers and the fire that followed generated a gigantic plume of debris and gases that lingered for months and particulate matter that settled from the plume was often resuspended by wind gusts or the movement of vehicles and workers involved in the rescue and cleanup effort. While the immediate priority was to rescue survivors of the attack many questions have since arisen regarding potential health hazards that may have existed due to poor air quality at the site. To what degree an air quality hazard existed and whether appropriate information and safety precautions were made available to volunteer rescue workers at the site has given way to a national debate with obvious ramifications for rescue and recovery efforts in the future.

What was the nature of air quality at ground zero following the attack? According to Professor Emeritus Thomas Cahill, head of the University of California and Davis' DELTA Group (for Detection and Evaluation of Long-Range Transport of Aerosols), a collaborative association of scientists at several universities and national laboratories, conditions as the site were "brutal" for recovery workers. In 2002, DELTA researchers issued a report based on their analysis of more than 8,000 air samples collected between October 2 and October 30, 2001, on a rooftop at 201 Varick Street, one mile north of the World Trade Center. Additional samples were collected through May 2002. In a press release dated September 10, 2003, Cahill said:

> "The debris pile acted like a chemical factory. It cooked together the components of the buildings and their contents, including enormous numbers of computers, and gave off gases of toxic metals, acid and organics for at least six weeks...."

The release goes on to say:

> "In that hot pile, some of the debris' constituent elements combined with organic matter and abundant chlorine from papers and plastics, and then escaped to the surface as metal-rich gases. These then either burned or chemically decomposed into very fine particles capable of penetrating deeply into human lungs.
>
> "In the trade-center air samples, Cahill identified four classes of particles that have been named by the EPA as likely to harm human health:
>
> - Fine and very fine transition metals, which interfere with lung chemistry.
> - Acids, in this case sulfuric acid, which attack cilia and lung cells directly.
> - Very fine, un-dissolvable (insoluble) particles, in this case glass, which travel through the lungs to the bloodstream and heart.
> - High-temperature organic matter, many components of which are known to be carcinogens."
>
> 'For each of these four classes of pollutant, we recorded the highest levels we have seen in over 7,000 measurements we have made of very fine air pollution throughout the world, including Kuwait and China,' Cahill said."
>
> "They [the 8,000 air samples taken at Varick Street] detailed very high levels of fine airborne particles—particles that pre-September 11 EPA summaries had showed could raise a persons risk of lung damage and

heart attacks. That analysis had been accepted for publication in the peer-reviewed journal-Aerosol Science and Technology."

In an article published on RENSE.com on April 28, 2002, titled "EPA Cover-up of Ground Zero WTC Toxics Alleged September 11th Environmental Hypocrisy", Jackie Alan Giuliano PH.D., reported an analysis of air quality at the World Trade Center made by the National Aeronautics and Space Administration (NASA) shortly after the attack:

> "Not widely reported in the news media is the fact that the National Aeronautics and Space Administration (NASA) gathered data early on about the pollution levels at the site. The Airborne Visible/Infrared Imaging Spectrometer (AVIRIS), a scientific instrument designed to view the site in many different wavelengths, was flown on an aircraft by the Jet Propulsion Laboratory and NASA over the World Trade Center area on September 16, 18, 22, and 23, 2001.
> "A two person crew from the U.S. Geological Survey (USGS) collected samples of dusts debris from more than 35 locations within a distance of one kilometer from the World Trade Center site on the evening of September 17 and 18, 2001. While not by any means a complete study, the data showed elevated levels of asbestos and many other pollutants including heavy metals, aluminum, chromium, antimony, molybdenum, and barium."

A third study, conducted by George D. Thurston, Associate Professor with New York University's Institute of Environmental Medicine at Sterling Forest, was reported in the upstate Hudson Valley Times Herald-Record on August 23, 2003. The article stated:

> "A study conducted two days after the attack showed that the air quality at Ground Zero had the same pH as Drano.
> "George Thurston, associate professor with New York University's Institute of Medicine at Sterlig Forest, who conducted the study, said that the pH level was 10,000 times above normal. Minerals and pollutants are responsible for altering the air's pH level. When it goes too high, it can cause burns to the upper respiratory system.
> "Even as the federal government was issuing statements that there were not enough toxic contaminants in the air to put workers at risk, daily Federal Emergency Management Agency briefings at the site warned about phosgene in the air.
> "One local environmental engineer who attended those classified meetings said there were at least 180,000 pounds of freon

> stored in the Twin Tower basements for the air conditioning system. When freon is vaporized, it becomes phosgene.
>
> "Phosgene is a chemical weapon used during World War I. It kills by burning and blistering the upper airways.
>
> "In addition, bulk samples of dust at the site showed asbestos concentrations as high as 20 percent in some places. Each tower had more than 1,000 thermostats each containing 1-ounce of mercury, which vaporized. And pulverized glass, biocides, antifreeze and heavy metals like zinc and aluminum were part of the chemical soup that workers were breathing."

In contrast to these reports, the United States Environmental Protection Agency (EPA), the agency charged with the responsibility for providing support and information to State, local governments and the public regarding discharges and potential discharges of hazardous materials and airborne contaminants, issued six press releases, between September 13, 2001 and October 30, 2001, which essentially reassured the people of New York City that the air in Lower Manhattan was safe to breathe. What follows are relevant excerpts from those EPA press releases.

09-13-01 "Monitoring and sampling conducted on Tuesday and Wednesday have been very reassuring about potential exposure of rescue crews and the public to environmental contaminants....EPA and OSHA will work closely with rescue and cleanup crews to minimize their potential exposure, but the general public should be very reassured by initial sampling."

09-16-01 "Our tests show that it is safe for New Yorkers to go back to work in New York's financial district," (quoting Assistant Secretary of Labor for OSHA).

"The agency is recommending that businesses in the area planning to reopen next week take precautions including cleaning air conditioning filters and using vacuums with appropriate filters to collect dust"

09-18-01 "I am glad to reassure the people of New York and Washington, D.C. that their air is safe to breath [sic] ...(quoting EPA Administrator).

09-21-01 "NYC Monitoring Efforts Continue to Show Safe Drinking Water & Air"(press release heading).

10-03-01 Data Confirms No Significant Public Health Risks; Rescue Crews and Nearby Residents Should Take Appropriate Precautions.."(press release sub-heading).

10-30-01 "While we have fortunately not found levels of contaminates that pose a significant health risk to the general public, our efforts to monitor the area and keep the public informed of our findings have not waned."

On August 21, 2003, the office of the Inspector General of the EPA issued a 155 page evaluation report regarding EPA's role following the attacks titled "EPA's Response to the World Trade Center Collapse: Challenges, Success, and Areas for Improvement." The report is critical of EPA's press releases and the role that the White Houses' Council on Environmental Quality" (CEQ) played in influencing the final content of the press releases. Regarding the accuracy and appropriateness of the information contained in the releases, the report includes the following statements:

> "Communicating the potential health risks resulting from an environmental hazard is a key mechanism for warning the public to mitigate potential exposures and take other precautions to avoid unnecessary health risks."
>
> "EPA's early statements reassured the public regarding the safety of the air outside the Ground Zero perimeter area. However, when EPA made a September 18 announcement that the air was "safe" to breathe, the Agency did not have sufficient data and analyses to make the statement. The White House Council on Environmental Quality (CEQ) influenced, through the collaboration process, the information the EPA communicated to the public through its early press releases when it convinced EPA to add reassuring statements and delete cautionary ones."
>
> "EPA issued five press releases within 10 days after September 11, 2001, four more through the end of December, and another four through the end of May 2002. EPA's WTC press releases from September through December 2001 reassured the public about air quality. Although EPA's press releases generally recommended the rescue and cleanup workers

take precautions to reduce their exposure to pollutants, EPA's basic overriding message was that the public did not need to be concerned about airborne contaminates caused by the WTC collapse. This reassurance appeared to apply to both indoor and outdoor air."

"Information and the analyses of available data did not fully support the statement made in the September 18, 2001, release, which quoted the EPA Administrator as saying the air was "safe" to breathe. Four factors in particular posed limitations on the conclusions that could be made at the time about air quality:

- A lack of data results for many pollutants,
- An absence of health benchmarks for asbestos and other pollutants,
- Imprecise optical asbestos sampling methodologies, and
- Over 25 percent of the bulk dust samples collected before September 18 showed the presence of asbestos above the 1 percent benchmark.

"EPA did not have monitoring data to support reassurances made in press releases up to September 18 because it lacked monitoring data for several contaminants, particularly PCBs, particulate matter, dioxin, and PAHs."

"In addition to not knowing the health impacts of certain individual pollutants, information was not available on the cumulative or synergistic impacts of being exposed to several pollutants at once. For example, one medical expert suggested there may be a synergistic effect between PAHs and asbestos, since PAHs resemble cigarette tar. Studies have shown the lung cancer risk from exposure to asbestos is increased exponentially for cigarette smokers. In addition, this expert noted that the combination of high pH and the small shards of glass found in WTC dust could have had a synergistic impact on the acute respiratory symptoms that many people experienced."

The Inspector General's Report contains the following statements regarding CEQ's influence on the information contained in EPA's press releases.

"Coordination and collaboration impacted the completeness of the information and the substance of the message EPA communicated to the public through its press releases. As a result of the White House CEQ's influence, guidance for cleaning indoor spaces and information about the potential health effects from the WTC debris were not included in EPA's issued press releases. In addition,, based on CEQ's influence, reassuring information was added to at least one press release and cautionary information was deleted from EPA's draft version of that press release.

"EPA officials told us that EPA's WTC press releases issued during the weeks following September 11 were discussed in conference calls that included EPA officials, OSHA, and CEQ. Accordingly, the content of an EPA press release issued during this period could come from several different sources.

"Few written records were available on the process used to prepare WTC press releases. We found draft versions for two of the press releases. However, the White House's role in EPA's public communications about WTC environmental conditions was described in a September 12, 2001, e-mail from the EPA Deputy Administrator's Chief of Staff to Senior EPA officials:

> *All statements to the media should be cleared through the NSC [National Security Council] before they are released.*

"According to the EPA Chief of Staff, one particular CEQ official was designated to work with EPA to ensure that clearance was obtained through NCS. The Associate Administrator for the EPA Office of Communications, Education, and Media Relations (OCEMR) said that no press release could be issued for a 3 to 4 week period after September 11 without approval from the CEQ contact.

"Although EPA's position has been that WTC area residents should obtain "professional cleaning," EPA's press releases did not instruct residents to do so. Instead they instructed residents to follow recommended and proper cleaning procedures and referred the public to the New York City Department of Health (NYCDOH) for recommended cleaning procedures. We asked the OCEMR Associate Administrator whether her office had considered advising the public through a press release that they needed to obtain professional cleaning for their indoor spaces. The Associate Administrator stated: "It was in a press release: it was removed by....[the CEQ contact]."

"OCEMR's records contained a document, entitled 'PM FACT SHEET,' that discussed the health risk to "sensitive populations" from exposure to particulate matter. We asked the Associate Administrator whether she had considered putting any of this information in a press release. She said she had, but the CEQ official discouraged her from doing so. Her recollection was that he told her health effects information should not be included in EPA's press releases, and that anything dealing with health effects should come from New York because they were on the ground and they were already dealing with it."

"The extent of the CEQ official's influence on EPA's WTC press releases was most clearly illustrated by the changes that were made to a

draft press release dated September 14, 2001, that was issued on September 16, 2001. Every change that was suggested by the CEQ contact was made. The CEQ official's suggested changes added reassuring statements and deleted cautionary statements."

"We were unable to identify any EPA official who claimed ownership of EPA's WTC press releases issued in September and early October 2001. When we asked the EPA Chief of Staff whether she could claim ownership of EPA's early WTC press releases, she replied that she was not able to do so because the ownership was joint ownership between EPA and the White House," and that "final approval came from the White House." She also told us that other considerations, such as the desire to reopen Wall Street and national security concerns, were considered when preparing EPA's early press releases. The OCEMR Associate Administrator said of the September 16 release: "I did not feel like it was my press release."

"Cautionary statements in a draft version of the September 13, 2001, press release were removed and replaced with more reassuring statements. For example, the second clause of the caption to the draft press release, which noted that EPA was testing for environmental hazards, were replaced with a statement reassuring the public about environmental hazards. Further, the press release did not contain a statement in the draft version that EPA considered asbestos hazardous in this situation. We were unable to locate any record that explained why the changes were made, and the OCEMR Associate Administrator did not recall ever having seen the draft."

"In our opinion, Agency press releases are a very important form of communication. As detailed in our draft report, EPA press releases result from a deliberative process that should reflect the Agency's official position on significant issues. Press releases are made available to essentially all news media and may be quoted or paraphrased in radio, television, and other forms of communication. In our opinion, the Agency could have provided more complete and useful information in the press releases."

The following statement is contained in the report describing EPA's response to the above criticisms:

"In her August 8, 2003 response to our draft report, the EPA Acting Administrator stated that the report placed too much emphasis on EPA's press releases and did not sufficiently acknowledge EPA's many other communications. She further noted that EPA's early statement that the

> air was safe to breathe was made in direct response to the public's concern about asbestos contamination following the WTC collapse, and that the press release detailed the monitoring that led to the statement and made it clear that further monitoring would take place. The Acting Administrator also pointed out that EPA never withheld data from the public and made its extensive monitoring data available on its interactive web site. With respect to CEQ's involvement in the preparation of EPA's press releases, the Acting Administrator stated that the Agency coordinated with CEQ and that this coordination was neither unusual or unexpected during a catastrophic disaster on the scale of the WTC attacks. Further, she noted the EPA acknowledges that mistakes were made and things could have been done better, and that there are lessons to be learned in the difficult area of risk communication. Improving risk communications is an Agency priority as it implements its "lessons learned."

The EPA Inspector General's report concluded that:

> "given the current lack of health-based benchmarks, the lack of research data on synergistic effects, and the lack of reliable information on the extent of the public's exposure to these pollutants, the answer to whether the outdoor air around WTC was "safe" to breathe may not be settled for years to come."

Dr. Jackie Alan Guiliano's April 28, 2002 article, cited above, contains the following evaluation of EPA's public reports on the air quality at Ground Zero:

> "At a New York public hearing in February [2002], Hugh Kaufman, the Chief Investigator for EPA's Ombudsman Office, told a group of scientists, residents, and small business owners that he believed the EPA was deliberately not testing the air quality in the World Trade Center area properly and covering up the reasons why." Kaufman is quoted saying
> "I believe EPA did not do that [appropriately test the air quality near ground zero] because they knew it would come up not safe and so they are involved in providing knowingly false information to the public about safety."

On August 26, 2003, Senators Hillary Clinton and Joe Lieberman drafted a letter to President Bush protesting against White House interference with EPA press releases regarding air quality following 9/11. These statements are excerpted from that letter:

> "If the allegations contained in the Inspector General's report are true, as they appear to be, then the conduct of this White House with regard to this issue was GALLING AND BEYOND COMPREHENSION.
>
> "As we were told at our hearing on February 11, 2002, EPA's communications were relied upon by workers to decide whether or not to go back to their offices and job sites and by residents to decide whether or not to move back into their homes.
>
> "We particularly recall the plight of parents of school children that were struggling with the question of whether to send their kids back to schools in the area of Ground Zero.
>
> "For EPA to have provided anything but their best professional advice to those parents is INEXCUSABLE; for the White House to have EDITED OUT THAT ADVICE – including information regarding the HEIGHTENED RISKS that the air pollution might pose for young children – is nothing but MALFEASANCE."

The Committees will solicit additional testimony regarding these issues at today's hearing.

II. EPA/NYCDEP/NYCDOH Response to Interior Air Quality After 9/11

When the towers of the World Trade Center collapsed, they created a toxic dust storm that engulfed residences, schools, offices and other work places in the surrounding area. The pressure generated by the collapse forced heavy dust and gases into the windows, doors, ventilation systems and other open spaces of buildings many blocks away. The floors, walls, furniture and other surfaces of the apartments, offices, school rooms, stores and restaurants contained in these buildings were covered with tons of powdery dust, sometimes inches thick. As described earlier in this report, the United States Geological Survey and others have determined that the dust and gases in the WTC plume contained, "elevated levels of asbestos and many other pollutants including heavy metals, aluminum, chromium, antimony molybdenum and barium", all capable of undermining human health. However, in counterpoint to these findings,

EPA assured New Yorkers through its press releases that it was safe to reoccupy buildings in Lower Manhattan. Those press releases contained the following statements:

September 16, 2001

"New OSHA [Occupational Health and Safety Administration] data also indicates that indoor air quality in downtown buildings will meet standards."

"Our tests show that it is safe for New Yorkers to go back to work in New York's financial district."

"Air samples taken on September 13th inside buildings in New York's financial district were negative for asbestos."

"The Agency [EPA] is recommending that businesses in the area planning to reopen next week take precautions including cleaning air conditioning filters and using vacuums with appropriate filters to collect dust. Vacuuming will reduce the chance of reentering workers tracking dust into the buildings. This work is already underway by city agencies."

September 18, 2001

"We are very encouraged that the results from our monitoring of air quality and drinking water conditions in both New York and near the Pentagon show that the public in these areas is not being exposed to excessive levels of asbestos or other harmful substances," Whitman said. "Given the scope of the tragedy from last week, I am glad to reassure the people of New York and Washington, D.C. that their air is safe to breathe and their water is safe to drink," she added."

October 3, 2001

"Residents and workers returning to buildings where dust from the Trade Center has entered the building should follow proper procedures in cleaning buildings, but the general public should feel very reassured about the extensive environmental monitoring data that has been collected and analyzed."

> "Out of a total of 442 air samples EPA has taken at ground zero and in the immediate area, only 27 had levels of asbestos above the standard EPA uses to determine if children can re-enter a school after asbestos has been removed – a stringent standard based upon assumptions of long-term exposure. OSHA has analyzed 67 air samples from the same area, and all were below the OSHA workplace standard for asbestos."

The assurances given in EPA press releases and the absence of more definitive information from state and city agencies encouraged many residents and workers to return to their homes and jobs in Lower Manhattan. This cause and effect has led to widespread criticism of all the agencies involved. "Messages in the Dust," a report on official responses to 9/11, published by The National Environmental Health Association in September 2003, includes the following opinion of Paul Lioy, PH.D., Professor of Environmental and Community Medicine at Rutgers University:

> "Paul Lioy criticizes the agencies for letting people come back to Lower Manhattan prematurely. 'People came back but they never should have been allowed to be back,' says Lioy, 'No one should have been back at work. Children should definitely have not been back in school.' This was a chaotic time, but there was no basis, he says, for the city and federal government to state that the environment was safe to reinhabit."

"The International Ban Asbestos Secretariat" published an article, "Asbestos Spectre Haunts Manhattan" (by Laurie Kazen-Allen), on September 11, 2002 which stated:

> "The continued denial of asbestos health risks after September 11 by the Environmental Protection Agency (EPA) and New York State and City bodies, including the New York City Health Department was contradicted by doctors, scientists and civil servants whose theories were supported by independently gathered data. Tests carried out in November and December, 2001 of 59 apartments in lower Manhattan, found elevated asbestos levels in 20 per cent of the buildings. Despite the widespread knowledge about the hazards of asbestos and the warranted anxiety over indoor contamination levels, nothing was done for over eight months."

The article also contains the following statement relative to the reoccupation of Lower Manhattan:

> "Hugh Kaufman, formerly of the EPA's ombudsman's office, says: 'All the experienced people in the agency knew immediately it was a disaster and would need massive remediation... But decisions on how to approach it were made from the White House down, rather than from the scientists on the ground up. The message was to get downtown up and running as soon as possible and worry about the rest later.'"

A similar opinion was written by Joel Shufro (Executive Director of the New York Committee for Occupational Safety and Health), in December 2002, in the American Journal of Industrial Medicine (AJOIM). Mr. Shufro wrote:

> "Rather than use their position as a bully pulpit to provide the public with information they could use to make informed decisions, the agencies saw their role as reassuring the public or said little. From the outset, government agencies, including EPA, OSHA, PESH and the New York City Department of Health, made reassuring statements about the safety of the environment without adequate data. These statements, as one official bluntly told me off the record, were designed to 'reduce hysteria,' they were designed for 'crowd control.' Although some agency staff tried their best to qualify, clarify and disavow the statements of their agency heads, the agencies themselves never retracted their initial reassuring statements. The discrepancy between these official statements and the illnesses experienced by workers and community residents created a serious credibility gap that has not been closed—and in our estimation has bred contempt and cynicism, if not derision, among the public and in important segments of the public health communities."
>
> "The EPA, OSHA, and PESH now presume that the dust released by the collapse of the Twin Towers included asbestos-containing material. However, it was not until early February that OSHA, for example, made this presumption public and then only in a letter responding to an inquiry from the Laborers International Union of North America. There was no public warning and the agency took no steps to publicize this critical information. Why didn't OSHA, EPA or the New York City Department of Health hold a press conference and put out best practice protocols for cleaning up offices that would, at a minimum, give office workers and residents a standard to which they could have held their employers? A public announcement about the asbestos-containing character of the

> dust—in English and Spanish—might have had a dramatic impact on the day laborers who were hired to clean up lower Manhattan office buildings without appropriate equipment and no training."
>
> "The absence of strong enforcement and leadership on the part of EPA, OSHA, PESH, the New York City Department of Health, and New York City Department of Environmental Protection resulted in unnecessary exposure of workers and community residents to toxic substances. We also believe that such action has set a bad precedent."
>
> "A driving force and priority in this crisis was to re-open the downtown area, especially Wall Street. Public health was not government's main priority when the Mayor announced that Wall Street would be open the following Monday—only six days after the collapse. These decisions were made at the highest levels—probably at the White House. Politics, not public health, was in command."

On January 14, 2002, Andrew Schneider reported the following in the St. Louis Post-Dispatch:

> "Civilian scientists and physicians hired by unions, tenant groups, contractors and New York political leaders found just the opposite [of EPA assurances]. Taking hundreds of samples, many inside apartments, offices and condos, these experts used the newest electron microscope technology and fiber-counting protocols. They found far more asbestos fibers than did government investigators. These private experts – all regularly used by the government as consultants -- found levels in the dwellings that alarmed many assessing the health risk faced by New Yorkers.
>
> "These eminent asbestos researchers brought state-of-the-art methods to lower Manhattan and ... what they found with the new technology is dramatically different that what EPA and New York State reported," said Cate Jenkins, a senior EPA chemist in the agency's hazardous waste division."
>
> "For every asbestos fiber EPA detected, the new methods used by the outside experts found nine," Jenkins said. "This is too important a difference to be ignored if you really care about the health of the public."

Also in glaring contrast to the assurances that EPA gave to downtown New Yorkers, the agency apparently abandoned its own New York offices when traces of asbestos were found there on

September 14, 2001. EPA senior chemist, Cate Jenkins related the following in a September 3, 2003 letter to Congressman Jerrold Nadler describing EPA's cleanup of a building at 114 Liberty Street:

> "On 9/11/01, EPA Region 2 evacuated its office building at 290 Broadway in lower Manhattan because it found traces of asbestos in settled dust. The tests were only qualitative – EPA had no idea how concentrated the asbestos was. EPA only knew there was asbestos at some undetermined level. For all EPA knew, it could have been at levels lower than background. The thickness of the dust was so small that there was not enough for testing actual concentrations."
>
> "But this was enough to set off a panic by EPA Region 2 to evacuate its building for two weeks for professional abatement. EPA also bought respirators for its own employees."
>
> "What is relevant is the fact that all the many, many air tests at 290 Broadway from September through December showed no asbestos at all above the detection limit, with one exception: In one TEM air test, the level was 25 structures per square millimeter (25 s/mm2), right at the detection limit, and far below what EPA was telling the public was safe (70 s/mm2). In press statements at the time, EPA clearly stated that the air concentrations at its building at 290 Broadway were safe. However, EPA Region 2 was silent to the press about the fact that it had found asbestos in settled dust at 290 Broadway."
>
> "It is a double standard for EPA to now claim that the dust testing at 114 Liberty St. by the residents is irrelevant to risks. The risk from settled dust may not be accurately quantifiable to exact risk levels, but it does clearly represent a risk. EPA policy and government statutes state that any exposure to asbestos is unsafe."

Although EPA issued assurances that it was safe for residents, workers and school children to reoccupy buildings in Lower Manhattan, the agency disclaimed any responsibility for identifying and cleaning up indoor contamination by saying that it did not have the authority or the obligation to do so. According to EPA, the responsibility for contamination identification and clean-up belonged to local city agencies (NYCDOH & NYCDEP) which failed to ask for federal

assistance in the matter. The EPA Inspector General's August 2003 report cites the following "Situation Report":

> *"Residential sampling/reoccupation: On 9/30/01, EPA spoke to US Public Health Service and NYSDOH (New York State Department of Health) who have been discussing issue with NYCDOH. NYC will not be requesting State or Federal assistance for residential sampling or reoccupation issues. The Federal Response Plan assigns responsibility to the U.S. Public Health Service under ESF-8, Health and Medical Services, when state and local resources request Federal assistance for medical and public health assistance."*

The Inspector General also reported that:

> "In addition, correspondence from the Region 2 Administrator indicated that in an October 9, 2001, meeting between FEMA, EPA, and New York City officials, City officials stated that they would not be requesting EPA's assistance for residential sampling or reoccupation issues. The September 30 report also indicated that New York City would not be requesting Federal assistance for cleaning roof debris. New York City officials disagreed with the characterizations of their statements presented in these documents and told us that they repeatedly expressed the position that the City welcomed any authorized federal assistance at that time."

EPA's evaluation of the situation has been severely criticized as to whether the agency had the authority and an obligation to react to indoor contamination issues. The following information is excerpted from the EPA Inspector General's Report:

> "EPA was criticized for not initially taking a greater role in indoor testing and cleaning. U.S. Congressman Jerald Naddler (D-NY), whose district includes Lower Manhattan, contended that EPA violated the law by allowing New York City to handle indoor air quality and not exercising oversight authority pursuant to the National Contingency Plan (NCP). EPA maintained that the NCP does not create a right to a Federal response and its approach to indoor air was a "proper and legal exercise of our discretion" under the NCP."
>
> "EPA does not have clear statutory authority to establish and enforce health-based regulatory standards for indoor air. EPA is provided the

authority to respond to releases of hazardous substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, or Superfund). Specifically under Section 104(a) of CERCLA, EPA is authorized, consistent with the NCP, to remove or remediate any hazardous substances that is released into the environment, or any pollutant or contaminant that may present an imminent and substantial danger to the public health or welfare. Asbestos is a hazardous substance under CERCLA.

"Neither CERCLA not the implementing regulations under the NCP obligate EPA to undertake response actions. As provided in the NCP, 'activities by the Federal and State governments in implementing this subpart are discretionary governmental functions' that do not create 'a right to federal response' nor 'any duty of the Federal government to take any response action at any particular time' (40 CFR § 300.404(h)(3)). Moreover, CERCLA contemplates State participation in response actions (42 U.S.C. 9621(h)0, and the NCP allows for States to assume the lead agency role.

"CERCLA only applies to the release of hazardous substances "into the environment." CERCLA defines "environment" as "the navigable waters ...and... any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air within the United States." Courts have held the emissions of dust within enclosed buildings are not releases "into the environment" and therefore are not CERCLA releases. However, in the WTC case, the contamination of indoor spaces was caused by an external event – the collapse of the WTC. The collapse itself caused a release of hazardous substances into the "environment" when a huge dust plume was released into the ambient air. Matter from the dust plume then entered buildings in the surrounding area. In such a case, when the release "into the environment" ends up contaminating enclosed structures, CERCLA provides the EPA the authority to take any actions necessary to eliminate or mitigate the threat to public health from the release.

"A 1998 Presidential Decision Directive (PDD62) tasked EPA with the leadership role in cleaning up buildings and other sites contaminated by chemical or biological agents as a result of an act of terrorism. This leadership role was discussed in the EPA Administrator's November 28, 2001, testimony before a Congressional Subcommittee of the Committee on Appropriations, wherein she noted that:

> *Under the provisions of PDD62, signed by President Clinton in 1998, the EPA is assigned lead responsibility for cleaning up buildings and other sites contaminated by chemical or biological agents as a result of an act of terrorism. This*

> *responsibility draws on our decades of experience in cleaning up sites contaminated by toxins through prior practices or accidents.*

"The expectation that EPA should be the lead agency for responding to indoor contamination has been clarified since September 11, 2001. The July 2002 *National Strategy for Homeland Security* issued by the Department of Homeland Security states that"

> *"After a major incident, the Environmental Protection Agency will be responsible for decontamination of affected buildings and neighborhoods and providing advice and assistance to public health authorities in determining when it is safe to return to these areas,"*

The Inspector General's report concluded:

> "For indoor environment concerns resulting from the collapse of the WTC towers, EPA had the authority to act under CERCLA but was not obligated to do so. Guidelines exist for determining whether an emergency response is warranted; however, these guidelines are not definitive. Under the NCP, it was within EPA's discretion to defer to New York City the responsibility for responding to indoor contamination concerns. EPA's action was consistent with the FRP, which is intended to supplement local government response.
>
> "Although EPA acted within its discretion, a 1998 Presidential directive and the more recent National Strategy for Homeland Security task EPA with taking the leadership role in cleaning up building and other sites contaminated by chemical or biological agents as a result of an act of terrorism. EPA needs to work with the Department of Homeland Security and other agencies to determine the nature and form with which the Federal government should assume a more direct role in addressing indoor environment concerns, under what circumstances this direct role should occur, and the oversight mechanisms to be employed when local agencies undertake such responses. In the WTC case, the delay in providing a government-organized and adequately monitored cleanup in Lower Manhattan may have contributed to unnecessary exposures to asbestos and other pollutants by unprotected workers and residents.

When EPA abdicated its responsibilities regarding indoor contamination New York officials in turn delegated the burden for detection and cleanup to affected landlords and tenants.

The Inspector General's report indicates that:

> "Initially, building owners were held responsible for cleaning up their own buildings, including interiors and exteriors. According to New York City officials, the issue of funding the cleanup of privately owned buildings was discussed with FEMA and EPA; the initial federal position was that the Stafford Act (the implementing statue for the FRP) did not provide direct funding to New York City for this cleanup. New York City officials said that during this discussion they informed the federal agencies that building owners would be responsible for funding the cleanup of their buildings and the federal agencies agreed with this position. Under this arrangement, owners of rental units were responsible for cleaning apartment walls, ceilings, and floors; common areas, such as hallways and lobbies; and heating, ventilation, and air conditioning (HVAC) systems, when deemed necessary as explained in guidance provided by New York City. Renters were responsible for cleaning personal belongings. In resident-owned condominiums, residents were responsible for cleaning their units, while building owners were responsible for cleaning common areas and HVAC systems."

EPA remained inactive on indoor contamination for almost six months before yielding to public pressure to participate in the cleanup. The Inspector General reported:

> "In February 2002, EPA initiated a multi-agency task force on indoor contamination. The former EPA Chief of Staff told us that EPA initiated this effort because 'Over time, we saw that New York City was not prepared to handle all the issues related to indoor air and offered to support them.' The task force developed a plan in which EPA assumed the lead role for overseeing a FEMA-funded cleanup of residences in Lower Manhattan. EPA, New York City, and FEMA officials announced this plan to the public on May 8, 2002. Residents of Lower Manhattan living south of Canal Street could request testing and cleaning of their residences, or just testing. Public registration for the indoor testing and cleaning program ended December 28, 2002.

Many EPA critics feel that this response was inadequate and that it arrived much too late. Joel Shufro and others are quoted in the previously cited article, "Asbestos Spectre Haunts Manhattan" (9/11/2002), regarding EPA's late entry into the situation:

> "Succumbing to public pressure, the EPA changed tack in May, 2002 when a special hotline was set up to assist residents have their homes tested and cleaned. This action was criticized by Joel Shufro of the NYCOSH: 'It's a shame these measures were not taken at a time when they could have prevented the heavy exposure to the toxic dust that covered lower Manhattan..' Unfortunately, Manhattan residents are not the only ones at risk from domestic exposure to asbestos. Robin Howie, an occupational hygienist, is concerned about asbestos levels in the homes of Ground Zero recovery staff who unknowingly took fibers home on their clothing. Once indoors, this 'contamination' could have become airborne and inhaled by family members...Everyone who was in Manhattan on September 11th should thoroughly decontaminate their homes...Anyone exposed to asbestos should stop smoking immediately to reduce their lung cancer risk."

> "Although the EPA's belated decision to address indoor asbestos contamination is something, it is, critics say, too little, too late. According to William Henning, Chairperson of the NYCOSH: 'The limitations that the EPA has chosen are completely inexplicable....World Trade Center contamination is a public health problem and the EPA is treating it like a public relations problem. By what logic can they agree to clean up a residence but not a workplace in the same mixed-use building? Do they think that the dust cloud and smoke that filled lower Manhattan for four months only contaminated residents? They ought to clean up all Trade Center contamination wherever it exists, and they ought to do it in accordance with the EPA's own regulations in the federal National Contingency Plan, which call for a cleanup that is much more thorough than the one the EPA now plans.'Congressman Jerrold Nadler agrees:' it's a major health catastrophe. We're allowing it to happen, and it's immoral because people are going to die from this.' He believes that EPA's plans are tragically flawed ignoring, as they do, small businesses, firehouses and thousands of residences in Brooklyn which were hit by the toxic plume. Dr. Cate Jenkins says the Agency's new cleanup plan "is grossly inadequate," using discredited techniques and inferior equipment. Although 30,000 Manhattan apartments qualify for the $7,000 EPA clean-up, the decontamination program is voluntarily. The effectiveness of cleaning up selected units while others remain polluted will be compromised by the circulation of air and dust through common air vents and systems."

In a previously cited letter to Congressman Jerrold Nadler, on September 3, 2003, EPA senior chemist Cate Jenkins accused the agency and the New York City

Department of Environmental Protection of ineffective cleaning efforts regarding their work on the mixed use building at 114 Liberty Street. The building has nine floors of residential condominiums and two floors of commercial tenants. In her letter Ms. Jenkins wrote:

> **"Re: EPA/NYCDEP clean-up of WTC dust at 114 Liberty Street**
>
> **1. They left visible dust with high levels of asbestos after the clean-up and pronounced the building safe to re-occupy.**
>
> **2. They ignored residents' own testing which contradicted their claims.**
>
> **3. They ignored the presence of silica, a known human carcinogen, at hazardous levels.**
>
> **4. They refuse to re-clean."**
>
> "My comments arise from my personal concern over misrepresentations by EPA and their deviations from their criteria for the clean-up of WTC contaminants. The conclusions and opinions are those of the author and do not necessarily reflect those of the U.S. Environmental Protection Agency."
>
> "After EPA/NYCDEP completed the two abatements, the residents performed their own additional testing. This was motivated by the fact that EPA/NYCDEP contractors had not abated areas of clearly visible dust in the exposed wall spaces and elsewhere."
>
> "Dusts underneath floorboards were also tested, because cracks in the floor boards had allowed lines of WTC dust to settle in visible lines both in and under these cracks, which were not removed by the abatements. It was feared that future vacuuming of the floors, impacts from foot traffic, contraction of the wood, or other normal activities would resuspend the dust lying in the cracks and under the floorboard. Residents had tried to get EPA/NYCDEP to address this contamination in the floorboards during the cleaning program, but EPA/NYCDEP refused."
>
> "Residents had both wipe and microvacuum testing performed under the floorboards and on the horizontal surfaces of the exposed wall and ceiling support systems. Note that wipe sampling is the preferred method for testing for residual asbestos or other dust-laden contaminants on

smooth surfaces which have been cleaned with any wet wiping or washing techniques. The quantitative wipe method for asbestos is ASTM Method 6480, and was the method used by EPA in its 110 Liberty St. cleaning study. The microvacuum method, ASTM Method 5755 is only suitable for freshly deposited dust layers that have not been touched by wet wiping, washing, etc. This is because water and detergents will temporarily bind residual dust-borne contaminants to the surface so that they will not be picked up by the dry vacuuming technique used in the ASTM microvacuum method. As discussed in my 12/19/01 memorandum, wipe testing has been demonstrated to pick up 4 times more asbestos from smooth surfaces compared to microvacuum sampling."

"The surfaces tested by the residents at 114 Liberty showed elevated levels of asbestos, most from 10,000 to over 1 million structures per square centimeter (s/cm). These laboratory results demonstrate the presence of significant dust after the two abatements by EPA/NYCDEP."

"Although acknowledging that dust testing was useful in determining abatement effectiveness, EPA/NYCDEP dismissed the residents' asbestos dust testing as being irrelevant to showing that there were any kinds of risk from, or hazards associated with the high levels of asbestos in the dust after the cleaning at 114 Liberty."

"The EPA Inspector General (IG) also does not agree with EPA that settled dust test levels should be ignored, and recommended that EPA develop a standard to establish risk levels for settled dust tests:

'We believe EPA should...develop health-related screening levels for asbestos in dust K-factors'

"For the reasons given above, EPA should acknowledge the fact that the elevated levels of asbestos found by the residents at 114 Liberty St. represents a health risk, although of uncertain exact numerical magnitude, as it demonstrates that asbestos is above background levels."

Ms. Jenkins concluded:

"It appears that the EPA/NYCDEP contractors responsible for the clean-up at 114 Liberty were on a tight schedule, which took precedent over performing the abatement to specifications. The exposed structural supports in the exposed walls and ceilings would have required the use of nozzles attached to HEPA vacuums and wet wiping of small area surfaces. This detail work would have consumed much more time than cleaning large flat surfaces like floors and walls. The contractors also may have violated the sampling protocols themselves (not using-

> aggressive sampling, and/or not pulling the specified volume of air during sampling) so as to bias the laboratory test results."
>
> "It also appears that EPA does not want the trouble and added expense that would be entailed by additional abatements at 114 Liberty, even to the extent of misrepresenting test results in its reports and statements to FEMA. This was done even to the extent of knowingly exposing residents at 114 Liberty Street to silica, a human carcinogen, at levels higher than EPA's criterion and the NIOSH benchmark as well. This was also done at the expense of dismissing resident testing of dusts for asbestos which proved that visible dust accumulations were still present, and at higher asbestos concentrations than background."
>
> "EPA has also been misrepresenting the health effects of silica in all its WTC-related documents, concealing the fact that it is a federally recognized human carcinogen, and that it causes chronic conditions similar to those being reported as "WTC cough.""

In her report, the Inspector General came to the following conclusion and made four recommendations containing measures that must be taken by EPA before buildings in Lower Manhattan can be given a clean bill of health.

> "EPA, in cooperation with FEMA and New York City, initiated a large-scale indoor cleanup. In our opinion, this cleanup should meet the minimum criteria for protecting human health that EPA has established for Superfund cleanups. Also, the indoor cleaning and testing program should employ aggressive testing in all residences and treat buildings as a system. Additionally, EPA should evaluate the potential health risks for pollutants of concern in work spaces for geographic areas north of Canal Street, in Brooklyn, and any other areas where meteorological data show pollutants of concern may have been deposited."
>
> "We recommend that the EPA Administrator ensure that EPA Region 2:
>
> 6-1. Submit the revised "World Trade Center Indoor Air Assessment: Selecting Contaminants for Potential Concern and Setting Health-Based Benchmarks" document to TERA for a second peer review.
>
> 6-2. Implement a post-cleaning testing program to ensure that, in addition to asbestos, the indoor cleanup program has reduced residents' risk of exposure from all of the identified COPCs to acceptable limits.

6-3. Due to concerns over possible re-contamination of residences cleaned under the Indoor Air Residential Assistance program, EPA should treat buildings as a system and implement a post-cleaning verification program to ensure that residences cleaned by the program have not been re-contaminated.

6-4. Work with FEMA and OSHA to assess whether the ongoing residential testing and cleaning program should be expanded to address potential contamination in workspaces in Lower Manhattan, or whether other measures need to be taken to ensure that workspaces are not contaminated with WTC dust."

On March 2, 2004, a little more than six months after the Inspector General's report, EPA responded to its critics by setting up a 17-member panel to revisit issues relating to the indoor cleanup, and committing to retest up to 20 percent of the involved apartments (840 of 4,200) to ensure that they are safe for habitation. On the above date an article in the New York Times stated that:

"Responding to criticism from residents and officials of the way the federal Environmental Protection Agency handled the cleanup, a 17-member panel of scientists, environmental experts and a resident - most of them independent from the federal government - was formed to look into an issue that still disturbs many people more than two years after the attack. The panel wants to make sure that the first cleanup was done properly and that apartments have not been recontaminated by polluted air carried through ventilation systems from apartments in the same building that were never cleaned.

"Once the retesting of a representative sample of the apartments is completed over the next few months, the panel will make recommendations that federal environmental officials will consider but do not have to carry out.

"Besides retesting, the panel will evaluate the practice of testing for one element, asbestos, to determine whether other contaminants were present. And the panel will have up to two years to trace the path of the dust cloud created by the collapse of the twin towers through downtown streets.

> "Federal officials acknowledged yesterday that formation of the panel was also intended to clear the air about the E.P.A. and the way it had performed since the days right after the attacks, when officials broadly stated that the air downtown was safe to breathe."
>
> "Dr. Paul Gilman, assistant administrator for research and development at the E.P.A., is the panel's chairman. He said his office was developing a plan for a sample of up to 840 of the 4,200 apartments already cleaned or tested.
>
> "Some will be selected by location, he said, and others by whether they have central ventilation and air-conditioning systems. Residents will not be able to ask that their apartments be rechecked because of the random nature of the sample.
>
> "Dr. Gilman said that he hoped to present a preliminary retesting plan at the panel's first meeting at 10 a.m. on March 31 and that he wanted to have results available by June."

On March 10, 2004 a lawsuit, seeking class-action status, was filed against EPA in Manhattan federal court by 12 people who live, work or go to school near the World Trade Center site. The suit charges EPA with ignoring its own rules and procedures and failing to ensure that the area was safe before encouraging people to return. It does not seek money damages but asks that the government pay for long-term health monitoring of people affected by 9/11 and the thorough cleaning of affected apartments and businesses.

At today's hearing the committees will solicit testimony regarding EPA's new initiative including testimony from area residents who feel that a more comprehensive retesting program is called for.

III. Illnesses and disabilities associated with 9/11.

The collapse of the World Trade Enter exposed thousands of New Yorkers, and others, who lived, worked or went to school in Lower Manhattan, and some areas of Brooklyn, to a wide range of irritants and toxic agents. As previously indicated these components included organic

products of combustion, volatile organic compounds, acid mists, heavy metals, soot, fibrous glass, asbestos, silica, gypsum, pulverized concrete and pulverized glass. In a January 2002 article, "Health Issues Around the World Trade Center Disaster" the Mount Sinai School of Medicine identified the population potentially exposed to danger as:

> "1. People who worked primarily at Ground Zero, either during or after the disaster including New York Firefighters and firefighters from outside New York City, police officers from New York City and surrounding communities, emergency rescue workers from a variety of organizations (including emergency medical technicians and paramedics), building trades workers, members of the press/news media, health care workers, food service workers, structural and other engineers and a variety of other public and private sector workers;
>
> 2. People who worked in the immediate vicinity of Ground Zero restoring essential services such as telephone service, electricity, and transportation, or performing services vital to reopening buildings in the area, including cleaning and assessing the structural integrity of buildings;
>
> 3. People who had worked in the WTC vicinity prior to the disaster and who sustained exposures either on September 11th or upon their return to work in the area around the WTC. These include such disparate groups as financial sector workers, staff (and students) from surrounding schools and universities, retail workers, garment workers, municipal and state employees from a variety of agencies, health care workers and others; and,
>
> 4. Residents of the surrounding communities."

On October 28, 2003, Doctor Robin Herbert of Mount Sinai, testifying before the congressional Subcommittee on National Security, Emerging Threats, and International Relations, quantified the affected population as follows:

> "Ultimately, an estimated 40,000 workers and volunteers were involved in rescue, recovery, and restoration of essential services at the site; an estimated 10,000 workers were evacuated from the towers or the immediate vicinity on September 11th; approximately 100,000 workers worked in the vicinity of the attacks; and approximately 25,000 people lived in the immediate area of the attacks. Unfortunately, many of them have developed serious, persistent health problems as a result of the attacks."

In spite of EPA assurances that the air in Lower Manhattan was safe to breathe, media reports of illnesses to exposed parties abounded. In March 2004, Newsweek reported on two such cases:

> "Jim Gilroy and his daughter live a few blocks from the site of the World Trade Center. Like thousands of others, they left their apartment after the September 11 attacks, staying with friends for about three weeks. But when then-Environmental Protection Agency director Christine Whitman and other officials announced that the air was again safe to breathe in their neighborhood. They moved back home. Though Gilroy cleaned up the dust that coated everything in their apartment, he soon began suffering from severe headaches and sinus problems and his daughter developed chronic rashes.
>
> "Robert Gulack, a senior attorney with the Securities and Exchange Commission, was in his office in the 7 World Trade Center building when terrorists hijacked the two commercial airlines and flew them into the Twin Towers. Gulack got out before his building collapsed. Just over a month later, he returned to the neighborhood to work in the SEC's new offices in the Woolworth building, a few blocks from the World Trade Center site, after being told it was safe. But two days later, he developed asthma; then he fell ill with bronchitis and pneumonia. Testing showed abnormally high levels of asbestos in his office building and on the outside walls. By the time he was granted federal compensation last month for an upper respiratory inflammation due to fumes and vapors at the building, an X-ray showed he had already developed permanent scars on his lungs."

On April 28, 2002, Jackie Alan Giuliano, PH.D. published an article, referred to earlier, on Rense.com titled "EPA Coverup of Ground Zero WTC Toxins Alleged: September 11th Environmental Hypocrisy." The article contains the following story about a rescue worker at ground zero:

> "What studies done to date will not show are the localized toxic clouds of multiple substances that have been formed as millions of pounds of chemical compounds from the debris combine in unexpected ways. Many rescue and cleanup workers feel they have become ill from these invisible toxic clouds. A reader of my weekly commentaries contacted me about her friend and colleague, a rescue worker from a fire department in another state who was ordered to the World Trade Center

> right after the disaster. She became progressively sicker soon after this work and has been shuttled from doctor to doctor.
>
> "A bone marrow aspiration revealed a huge level of toxic mercury in her system that could only have gotten there from an intense outside exposure. The only place she could have gotten such an exposure was at the World Trade Center.
>
> "Increased pressure inside her skull has developed, and she is having severe headaches, nausea, and nosebleeds. Her friend reported to me that, 'She has a horrible rash all over her body. She has horrible cramps in her legs and back. Her lung capacity is greatly diminished and she has had major changes in her vision, and was told she is going blind. The government doctor who was sent to treat her told her to take a six month leave of absence and get her life in order because in six months she would no longer be able to perform her duties as a firefighter.'
>
> "The supervisor of this 12 year veteran rescue worker told her 'all of this medical testing is fine, as long as it does not get in the way of you doing your job.' With the EPA downplaying any toxic effects, she is getting little sympathy from agencies and insurance companies."

Several studies and surveys have been published since 9/11 which attempt to document the extent of health issues that can be attributed to the terror attack. Manhattan Community Board 1, which encompasses the World Trade Center site, conducted a survey and reported the following in a November 3, 2003 letter to Congresswoman Carolyn Maloney:

> "... in a survey of local residents that we conducted in May 2003, 30% of those surveyed reported that they currently suffer from respiratory problems such as coughing, wheezing or sinus headaches brought on by the 9/11 attack."

In September 2002 the American Journal of Industrial Medicine reported on a medical screening program for Lower Manhattan clean-up workers created by Doctor Steven Markowitz, and others, at Queens College. The article reported that more than 400 workers were examined and it contained the following descriptions and conclusions:

> "In January 2002, the Center for the Biology of Natural Systems (CBNS) of Queens College initiated a free medical screening program for building clean-up workers who did not work at Ground Zero, but who were responsible for cleaning contaminated office and residential buildings adjacent to Ground Zero. The project was conducted in collaboration ith the New York Committee for *Occupational Health and* Safety (NYCOSH) and a community-based immigrant support organization, the Latin American Workers' Project. Many of the building clean-up workers were day laborers who were hired off street corners on a daily or weekly basis. This was largely a Hispanic population, many of whom did not speak English, did not have health insurance, and did not have training in working with hazardous materials.
>
> "Participants were generally not provided with respirators or any personal protective equipment and were not informed about the contents or any environmental sample test results on the dust and debris that they removed from offices and apartments. Most participants had worked performing indoor building clean-up adjacent to Ground Zero for 6-12 weeks and had stopped such work 4-*8 weeks prior to* examination.
>
> "Nearly all of the examined building clean-up workers reported current health symptoms that had first appeared or worsened after September 11th. Their symptoms fell into *two broad categories;* irritation of the airways (cough, sore throat, nasal congestion, and chest tightness), and systemic symptoms (headaches, fatigue, dizziness, sleep disturbances). Most participants who complained of symptoms reported no or little improvement of symptoms despite cessation of work and associated dust exposure for 4-8 weeks prior to examination."

Doctor Markowitz also stated, in a January 28, 2002 article in the Daily News, that:

> "Between a quarter and a third of the screened workers had 'significant respiratory affect' such as coughs, shortness of breath, sore throats, dizziness and headaches from their weeks of cleaning contaminated twin towers dust from lower Manhattan homes and office buildings, he said.
>
> "We tell them that we expect the symptoms will abate over time," Markowitz said. "But we honestly can't tell people how long those symptoms will last, if they will ever be 100% again or what the long-term effects of their exposure will be."

Dr. Robin Herbert, whose testimony before the Congressional Subcommittee on National Security, Emergency Threats, and International Relations (10/28/03) was mentioned earlier, is

Medical Co-Director of the Mount Sinai Center for Occupation and Medicine and also Co-Director of the World Trade Center Worker and Volunteer Medical Screening Program. The Screening Program was created less than one year after 9/11 and its work and findings were described by Dr. Herbert in her testimony:

> "...in June 2002, Mount Sinai received $11.8 million in federal funding to design and coordinate a consortium of health care centers in the New York metropolitan area and nationwide to provide free medical screening exams for WTC responders who were involved in various rescue and recovery efforts, the removal of debris, the restoration of vital services, and clean-up of the surrounding buildings in the WTC area and Staten Island landfill.
>
> "In January, 2003, we released some preliminary findings from an analysis of 250 of the first 500 people who came through the program. To summarize, well over 50% of those evaluated had persistent World Trade Center-related effects close to one year after the event. This is a finding that, unfortunately, holds true today. Specifically,
>
> • 78% of participating emergency responders reported at least one WTC-related pulmonary symptom that first developed or worsened as a result of their WTC-related efforts; 46% of the sample still experienced at least one pulmonary symptom in the month before the screening examination.
>
> • 85% reported at least one WTC-related ear, nose or throat (ENT) symptom; 52% of the sample still experienced at least one ENT symptom in the month before the screening examination.
>
> • 52% reported mental health symptoms requiring further mental health evaluation; approximately 1 in 5 of the sample reported symptoms consistent with post-traumatic stress disorder (PTSD).
>
> "Most striking is the fact that a large proportion of this sample showed evidence (either symptoms or abnormal test results) suggestive of respiratory disease 10 months to one year after September 11, 2001. Seventy-three percent of the sample had either ENT symptoms or abnormal physical examination findings or both. Similarly, 57% of the sample had either pulmonary symptoms or an abnormal pulmonary function test or both. Unfortunately, however, many of those who've come to our screenings reporting persistent WTC related symptoms have

> received either no clinical care or inadequate clinical care at the time of their first evaluation with us.
>
> "We've now seen over 8000 men and women in our screening program, and the rates of persistent upper and lower respiratory symptoms remain very high, more than 2 years after the terrible events of 9/11 and the exposures that followed."

Phillip H. McArdle, Health and Safety officer for the Uniformed Firefighters Association, also testified before the Subcommittee regarding 9/11 related illnesses and disability within the New York City Fire Department. Mr. McArdle stated that:

> "As of October 2003 the FDNY has retired approximately 1800 firefighters due to WTC related illnesses. Both the union and the fire department agree that this unprecedented retirement rate will continue as more firefighters are examined and diagnosed with 9/11 related illnesses. All 1800 of these firefighters were healthy before 9/11 and would have most likely worked for the Fire Department for an average of 20 years or longer which had been the trend prior to 9/11. Instead, we have members who in some cases are as young as 30 years old who will be disabled for the rest of their lives. As the retirement age decreases it will cost more for long-term health care than ever before; prescription drugs is one of our biggest concerns.
>
> "The NYC Firefighter WTC Medical Monitoring/Treatment Program that will be run by the FDNY Bureau of *Health Services with the joint* sponsorship of the UFA, LIFQA and EMS/Paramedic Unions has found that in the first month 4 firefighters required life support (mechanical ventilation) of chest surgery for severe respiratory distress following WTC exposure during the collapse. 95% of NYC Firefighters complained of new-onset respiratory symptoms (mostly cough) during that first week. In the first 6 months following the collapse 343 FDNY firefighters required more than 1 month of medical leave for new on-set respiratory illnesses such as asthma. And nearly 2 years later over 1800 FDNY firefighters have or are in the process of receiving permanent disability for new onset past-WTC asthma and respiratory injury. Random voluntary testing of the highest exposed group of NYC Firefighters present during the first day of the collapse has found that 25% have new onset, post-WTC airway hyper reactivity/asthma on objective medical testing methacholinechallenge testing). This has persisted on serial testings. Firefighters who were not present during the collapse but there doing intense rescue/recovery efforts over the next 48 hours nearly 7% have new-onset, post-WTC, and persistent airway hyper-reactivity."

The following excerpt from the March 13, 2004 edition of Newsweek gives a further indication of how residents living near the World Trade Center have been affected by the air quality following 9/11:

> "And recently, a study published in this months Journal of Allergy and Clinical Immunology found that children with asthma who lived within five miles of the World Trade Center site saw a substantial increase in the severity of their symptoms in the year following the attacks. The retrospective study of Chinese-American children who received medical care at the Charles B. Wang Community Health Center in Chinatown, located about one-and-a-half miles from the World Trade Center, found that in the year before the September 11 attacks, 306 pediatric asthma patients made 1,044 visits to the health clinic. In the year after, 510 pediatric patients made 1,554 asthma-related visits. The researchers noted a similar increase among adult asthmatics."

In the two and one-half years since 9/11 we have become increasingly familiar with many of the short-term effects of the air quality produced by the collapse of the World Trade center. As yet, however, we have no way of projecting what the long-term effects will be. Asbestos, for example, can take up to thirty years to bring about mesothelioma, and other cancer causing agents released during the collapse may take decades to evolve into a crippling disease. In 2002 Doctor Robert Brook of the University of Michigan reported that particulate matter in air pollution can cause constriction of blood vessels leading to heart attacks (Newsday – October 1, 2002). Will this lead to future heart attacks for those who were exposed after 9/11? To monitor the long-term effects of this unprecedented event, the National Institute for Occupational Safety and Health (NIOSH) was instrumental in creating the World Trade Center Health Registry. On October 28, 2003, Diane Porter, Deputy Director of NIOSH described the Registry to the Congressional Subcommittee as follows:

> "In collaboration with the New York City Department of Health and Mental Hygiene, ATSDR [Agency for Toxic Substances and Disease Registry] has established a registry to identify and track over the long term the health of tens of thousands of workers and community members who were the most directly exposed to smoke, dust, and debris from the WTC disaster. The World Trade Center Health Registry was launched on September 5, 2003, with an extensive public outreach campaign. Persons who choose to be included in the registry will be interviewed periodically over a period of 20 years or more concerning their physical and mental health, so that their health may be followed over time. Stringent safeguards are in place to protect the confidentiality of all information collected.
>
> "In the nearly two months since it was launched, more than 10,000 people have been interviewed for the registry. ATSDR and the New York City Department of Health and Mental Hygiene estimate that the registry will include 100,000 to 200,000 people, including rescue and recovery workers, office workers, residents and school children, making it the largest health registry of its kind. The registry will be maintained over time by the New York City Department of Health and Mental Hygiene. FEMA provided startup funds to ATSDR for the development and launching of the registry."

At today's hearing the committee will solicit updated testimony on all health issues related to 9/11.

Invited to testify, on Air Quality and health issues related to 9/11, are Jane M. Kenny, Regional Administrator, United States Environmental Protection Agency; Paul E. Zammit, Divisional Resource Director, United States Environmental Protection Agency; Nikki L. Tinsley, Inspector General, United States Environmental Protection Agency; Hugh Kaufman, Senior Policy Analyst, United States Environmental Protection Agency; Paul Gilman, PH.D., Science Advisor, United States Environmental Protection Agency; Christopher O. Ward, Commissioner, New York City Department of Environmental Protection; Thomas R. Frieden M.D., Commissioner, New York City Department of Public Health ; John T. Odermatt, Commissioner, New York City Office of Emergency Management; Richard Mendelson, Area Director, Occupational Safety and Health Administration / United States Department of Labor; Thomas Kunkel, Regional Director

(Region 02), New York State Department of Environmental Conservation; Dr. Kerry Kelly, Chief Medical Officer, Fire Department of New York City; Robin Herbert M.D., Medical c-o-director, Mount Sinai Center for Occupational and Environmental Medicine; Senator Hillary Rodham Clinton, United States Senator; Senator Charles Schumer, United States Senator; Honorable Jerrold L. Nadler, United States congressman; Honorable Carolyn B. Maloney, United States Congresswoman; Honorable Edolphus Towns, United States Congressman; Philip H. McArdle, Health and Safety Officer, Uniformed Firefighters of Greater New York; and, Roger Toussiant, President, Transport Workers Union of Greater New York.

Questions for Air Quality Hearing

Questions for Electeds

1. How would you characterize the City and Federal administration's interactions? Do you think there were problems in communication?

2. *If yes* What do you think caused these breakdowns in communication?

3. What roll do you think the White House had in eliminating information from the EPA, DOHMH and DEP findings?

4. What recommendations would you make in order to help set a protocol, in case such disaster was to strike our nation again, that adequately secures citizens' health and the economic security?

For Administration

With a disaster of this magnitude that required assistance from all levels of government, how was it determined who was responsible for what parts of the disaster relief and the clean-up process?

How often was there interaction between the EPA and City Agencies?

Did City agencies have to get public announcements authorized by the federal government?

Air Quality Studies

1. How were the parameters for air quality study determined?
2. Why were Brooklyn and other areas under the plume not included under the catchment area?
3. Has there been any testing done in Brooklyn or areas outside catchment area regarding 9/11 toxins? Any studies? If so, what result
4. Is there any means of testing areas under the plume now?

The Use of Day Laborers on the WTC site

1. What kind of protection was provided for laborers?
2. Who made the decisions on what safeguards were necessary?

All Clear for Residents to return

1. Who issued the decree for residents to return?
2. What is DEP/DOH role in determining that residents could return?
3. Who has monitored the clean up, commercial and residential?
4. When it was okay to open the Stock Exchange?

DOH Clean up Instructions

1. Did these instructions differ from established guidelines?
2. How did DOH disseminate this information throughout Lower Manhattan?
3. How did the instructions change as new information emerged?
4. What is the current status in regards to clean up information, i.e. Residential Buildings that are still contaminated, Deutche Bank deconstruction?
5. Asbestos removal responses from a variety of Building owners, to show what a low threshold satisfied DEP and DOH, why such a low threshold?
6. City only doing PLM testing versus EPA TEM testing, OSHA uses only PLM but if they find in one site the whole site is deemed infected, Why is the City not doing TEM testing?
7. How do the tests results differ from EPA?
8. Why is there not a uniform standard applied by City and Feds to get the best results?
9. Looking back at the clean-up process, what recommendations might you give for setting a protocol for clean-ups of disasters of this magnitude?

Building Certification Process

1. Who certified buildings were cleaned?
2. What was the certification process?
3. Has there been follow up with building owners who complied? Who did not comply?

Emergency Worker Equipment Requirements

1. EPA cleanup not being done at the firehouses? Who has the responsibility to do cleanup at the firehouses?
2. What is the status on Firehouse clean up?
3. What equipment is now mandated for extreme emergency procedures like 9/11?
4. Is there a separate health registry for 9/11 emergency workers? If not why?