

[We strongly recommend that the respirator sections be completely taken out of this report. Work place safety and personal protective equipment are matters within the jurisdiction of the Occupational Safety and Health Administration (OSHA). These matters are, therefore, inappropriate for assessment by EPA-OIG. Further, much of the material concerning respirators appears to be based on two reports that are inaccurate, incomplete and insufficiently researched.]

Respirator Use at Ground Zero Lacking

A widely publicized aspect of the WTC response was the ~~lack of respirator use~~ less than 100% compliance with requirements to use respirators by rescue and construction crews. It was beyond the scope of this review to determine the extent ~~that respirators were not used~~ of noncompliance with respirator requirements and why this occurred. However, we reviewed EPA's efforts to provide respirators, reviewed accounts of respirator use in various articles and reports, and inquired about respirator use and availability during our interviews with EPA, other Federal agencies, New York City, and non-governmental officials. Our limited work in this area indicated that respirators were ~~generally widely~~ available but were not worn provisions of the Site requirements for using respirators were not fully complied with for a number of reasons. A significant factor was the desire to save lives without regard for personal safety in the immediate aftermath of the disaster. Other reasons appeared to include the respirators' interference, due to the state of the technology, with the ability of emergency workers to communicate, ~~lack of training~~ [not true, fit-checking and orientation began as early as 9/12/01], ~~lack of enforcement of safety measures at the site~~ [totally false; the City, together with OSHA and the four contractors, undertook an aggressive effort to enforce the use of all personal protective equipment (PPE), especially respirators. These efforts were extensively documented throughout the recovery and clean-up efforts], and conflicting messages about the air quality at Ground Zero.

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Reports on Lack of Respirator Use

[This section should be completely deleted, because while it purports to represent a total picture of site operations, it in fact presents a very narrow and skewed snapshot by the author, who was at the site for a very limited number of hours, and who misidentified a key City agency – the Department of Design and Construction -- and its role in the rescue and recovery efforts.]

An October 2001 report¹ by the National Institute of Environmental Health Sciences discussed worker safety issues at the WTC site for the period up to October 5, 2001. The report's observations generally focused on construction workers at the site and not Fire Department rescue team or Federal disaster assistance personnel. According to the report:

- Respiratory protection was rare with the exception of heavy equipment operators. Further, workers were observed in the smoke plume emanating from the pile without hard hats, eye wear, or respirators. [This should not be presented as the norm. There were thousands of rescue and clean-up workers on the Site and a DDC official monitoring safety at the site personally observed many who did wear respirators diligently. There are thousands of photographs and hours of video that indicate the use of respiratory equipment and hard hats. Respirator use was tracked and enforced throughout the response to the disaster.]
- Workers did not decon [decontaminate] after leaving the site. [This implies a hazardous waste operation, and this rescue, recovery and clean-up operation was not such an event.] The hand/face and boot wash stations did not appear to be used by most of the workers.
- During the September 22-26, 2001, period, an increase in worker protection was observed, notably respiratory protection. Vehicles leaving the site began to be hosed down.

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“Worker Education and Training Program (WETP) Response to the World Trade Center Disaster: Initial WETP Grantee Response and Preliminary Assessment of Training Needs,” Donald Elisburg, John Moran, National Institute of Environmental Health Sciences WETP, National Clearinghouse for Worker Safety and Health Training, October 6, 2001.

~~There was no evidence that any safety and health program was operating at the site. The lack of an operating safety and health program was confirmed by various support personnel, workers, and government officials. [Absolutely untrue. There was an aggressive safety and health effort underway, spearheaded by the DDC and OSHA working in close collaboration. Beginning 9/12/01, daily health and safety meetings were held and attended by multiple City, State and Federal agencies, including EPA, FEMA, OSHA, DEC, DDC, DOH, DEP, FDNY, NYPD and OEM, together with the contractors' safety personnel, at which air monitoring and PPE protocols were discussed and established. There was a preliminary "Accident Prevention Plan" in place from September 14, 2001 through October 29, 2001, at which time the World Trade Center Emergency "Environment, Safety and Health Plan" went into effect. Teams of safety and health professionals worked around the clock providing "direct intervention" to get workers to comply with basic safety and health requirements, especially the use of PPE. There were as many as 30 safety professionals on site each day. OSHA employees were constantly roving the site with safety equipment, and provided hands on instruction and preliminary fit checking at IS 89 and at supply caches on the Site. There are tens of thousands of documents which record these multi-agency health and safety efforts and which can be provided upon request.]~~

A January 2002 report² prepared by a certified industrial hygienist for the Operating Engineers National Hazmat Program noted that during the period October 2 -16, 2001, less than half of the heavy equipment operators regularly used respirators when working on the "pile" at Ground Zero, and often this use decreased to less than one-third of the workers. This report, which discussed respiratory protection lessons from the WTC disaster, concluded that the respirators NIOSH recommended for use at the site were correct and sufficiently protective provided that they were properly tested and conscientiously worn.

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In contrast to the recovery operation at the WTC site, the January 2002 report

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"Respiratory Protection at the World Trade Center: Lessons From the Other Disaster," Bruce Lippy, CIH, CSP, January 15, 2002.

~~noted that that workers conducting the WTC debris sorting and inspection process conducted at the Fresh Kills landfill, was being handled as a hazardous waste operation with workers wearing~~ wore half-face respirators, hard hats, eye protection, and Tyvek suits. [WTC debris at the Fresh Kills landfill, and at Ground Zero, did not call for a hazardous waste response under OSHA standards, nor was it handled as such.] The author opined that ~~R~~respiratory protection compliance by workers at Fresh Kills was approximately 90 percent as opposed to 30-50 percent compliance at the WTC site. The author observed that:

“ . . . debris is pulled by workers from the smoking, twisted wreckage of the World Trade Centers and then wetted and hauled to a site where the debris is carefully sorted by workers wearing more protective clothing, much more consistently.”

~~In other words, the workers at the less hazardous site were more protected than the workers at the more hazardous site.~~ The author's perception was that PPE use was more prevalent at the Fresh Kills landfill than at the WTC site. [The report as written is again misleading in describing the debris as hazardous, and mischaracterizes the Fresh Kills landfill operation, which presented its own unique, multi-faceted challenges, as “less hazardous”] Moreover, the workers at the landfill were officially informed that not wearing respirators would result in disciplinary action. OIG investigators from our New York office who participated in the recovery operations confirmed the report's conclusions about the difference in respiratory use between the WTC and landfill sites.

Respirator Use

As demonstrated by a fact sheet prepared on September 11, 2001, EPA's emergency response officials immediately recognized the need for and recommended the use of air purifying respirators³ at Ground Zero (see Appendix S). EPA officials told us this fact sheet was provided to a FEMA official, but was not issued. We contacted a FEMA representative who told us that the flyer was not issued because it was decided that New York City should handle worker protection issues.

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NIOSH recommended the use of half-face negative pressure respirators with P-100, organic vapor/acid gas (P-100/OV/AG) cartridges. Respirators must be properly fitted in order to provide adequate protection against airborne hazards.

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EPA also provided respirators for workers at the site. According to a May 1, 2002, letter from EPA's Region 2 Administrator to Senator Joseph Lieberman (D-CT) and Senator George Voinovich (R-OH), EPA had distributed 22,100 air purifying respirators and 30,500 sets of P100 particulate cartridges to New York City by September 22, 2001. Additionally, 600 respirators (MSA and 3m brand) and 2,000 cartridges (GME-P100) were provided to the New York State Department of Environmental Conservation and the New York State Department of Health. The bulk of EPA-procured equipment was transported from EPA's Edison facility by the New York National Guard to the New York City Office of Emergency Management for distribution to response workers.

As the rescue phase progressed, EPA emergency response officials told us they were concerned about the ~~lack of respirator use~~ less than 100% compliance with respirator requirements at Ground Zero and outlined these concerns in a letter to NYCDOH, dated October 5, 2001. This letter outlined the threat of potential exposure of workers to hazardous substances. The letter noted that EPA had recommended and continued to recommend that workers at the site wear respiratory protection, and that workers comply with ~~de-contamination~~ procedures to prevent them from spreading ~~contaminants-debris~~ from the site to their homes, cars, and other locations. [Again, decontamination and contaminants language assumes a hazardous waste operation, and this was not such an event.] The letter stated that EPA did not have the authority to enforce compliance with non-EPA/United States Coast Guard employees and concluded by recommending that the Incident Commander adopt and enforce a site-wide Health and Safety Plan. A copy of the letter is attached as Appendix T.

Thank you for the opportunity to respond to the revised excerpts from the Draft Evaluation Report: EPA's Response to the World Trade Center Collapse: Lessons Learned, Assignment No. 2002-0000702. This response is on behalf of New York City ("the City") to the Draft Evaluation Report. Also, the City requests that you consider the comments forwarded to the Environmental Protection Agency (EPA) by letter dated July 8, 2003 concerning the initial excerpts that the EPA forwarded to the City, which are attached hereto, in addition to the comments contained herein.

Before commenting on the excerpts, which were forwarded to the City, the City must note that although it has requested that it be provided the entire draft report, so that it would be better able to address the comments in the draft report concerning the City, only excerpts were provided to the City. Without access to the entire draft report to place comments concerning the City into context, the City is disadvantaged in providing comments to the excerpts. However, comments in the excerpts concerning the City compel a response by the City and the City hereby responds to the best of its ability. The following comments are submitted on behalf of the City.

1. The City believes that the third sentence in the first paragraph on page 1 of the revised draft report is misleading. The sentence implies that the EPA assumed a lead role in responding to indoor environmental concerns because of criticism of the City. It implies furthermore that criticism of the City was warranted. The evidence does not support a conclusion that the EPA took a lead role with respect to this issue solely because of criticism of the City. There were a number of factors present at this time which probably influenced any EPA decision to take a lead role in addressing environmental concerns, including criticism of the EPA and the initial availability of federal funds at that time to address this issue. More importantly there is no evidence available to support that any criticism of the City with respect to indoor environmental concerns was warranted. Also, the sentence, refers to EPA initiating a multi-agency task force at that time. This implies that this was the first time that federal, state and City agencies worked together to address this issue. The documents supplied by the City show that federal, state and City agencies worked together from September 12, 2001 to address the environmental issues, including indoor environmental concerns. We recommend that the sentence be revised to read, "EPA began to assume a lead role in February 2002, when the Agency chaired a multi-agency task force to continue to address concerns about the indoor environment."

2. The City has similar comments with respect to the paragraph labeled "**Indoor Contamination Response**" on page 1. This comment refers to concerns raised by public and elected officials and specific criticism of the City. Again including this criticism appears to imply that the criticism was warranted, particularly since the City's position is not presented. The City notes that in the same paragraph, where criticism of the EPA is set forth, the EPA's position is presented in rebuttal to the criticism. The City believes that the evidence does not support the criticism. For example, criticism concerning delegating testing and remediation efforts to building owners and residents is unwarranted. The City did not delegate this responsibility to owners and residents. The owners and residents always had this responsibility, it was never the City's responsibility to do this and consequently the could not delegate what it did not have. Similarly, there is no evidence to support that the City did not enforce proper procedures for cleaning asbestos where it had the enforcement authority and that the City gave improper advice to the public on testing and cleaning procedures. As noted before, the EPA adopted the City's advice to its citizens. Moreover, including these criticisms implies that there

was asbestos in these buildings. There is no evidence to support a claim that any significant number of buildings were contaminated with asbestos. Both the sampling conducted by many agencies and New York City's response to complaints concerning asbestos, where out of over 300 responses to complaints there was 1 finding of asbestos at above the threshold level. This section also is not appropriate for this substantive section of the EPA report. The City does not dispute that there was criticism, but the criticism is irrelevant to whether the City and EPA followed the appropriate statutes, regulations and procedures. While the criticism may provide a basis for the reason for conducting the EPA Report, it does not provide any basis for the findings in the report. To include the criticism in the substantive portion of the report in the manner in which it is included is unduly prejudicial to the City. Accordingly, the City recommends that this section be deleted.

3. Concerning the second sentence in the paragraph labeled **"Initial Actions Taken by New York City and EPA"** on page 1, although the City was not provided with the documentation, the City does not dispute that there is EPA documentation concerning the alleged statement by the City. The documentation which appears to be quoted on page 4 and 5 of the revised report, refers to a conversation between the EPA and the U.S. Public Health Service and the New York State Department of Health, where these agencies allegedly relayed to EPA the alleged statement by the City. This is not the type of reliable evidence that should be required to support findings in an Inspector General report. The City cannot confirm or deny the statement given the vagueness of the statement. The City, however, can state that it welcomed any authorized federal assistance at that point in time. To include this statement is unfair to the City. The City therefore recommends that the statement be deleted.

4. Concerning the last sentence in the first full paragraph on page 2, the City believes that EPA Region 2's comment that it did not want to take a more assertive stance because it would create a confrontation is not valid for more reasons than just that EPA was the lead agency for Emergency Support Function #10. From September 12, 2001 to the end of the Response Effort, the EPA was thoroughly involved in the effort. EPA had a "seat at the table" as demonstrated by the documents submitted by the City. Moreover, there was a cooperative relationship with the City. In fact, when at a point in time during the Response Effort, EPA suggested that its functions be turned over to a contractor, the City urged the EPA not to do this and to continue to be part of the team. To suggest that EPA could not become more assertive or involved is inconsistent with the evidence.

5. The first paragraph in the section labeled **"New York City's Initial Response"** on page 2 is somewhat misleading. It fails to mention that the City's procedure in the past was to hold buildings owners responsible for cleaning up their buildings and that in previous disasters, the federal government did not provide for federal funding to municipalities to clean privately owned buildings. The City consequently had no authority to request reimbursement for this activity and no authority to enter privately owned buildings, without the owner's consent to effect such a cleanup. Thus, the second sentence is also somewhat inaccurate. We recommend that the first three sentences be modified as follows: "Consistent with past practices and federal law, building owners were initially held responsible for cleaning of their own buildings. According to New York City officials, the issue of funding cleaning privately owned buildings was discussed with FEMA and the EPA. Initially, the federal position was that the Stafford Act, the statute which provides authority for federal disaster response, did not provide funding for

cleanup of privately owned buildings. During this discussion, the federal agencies were informed that owners of privately owned buildings would be responsible for funding the clean up of their buildings and agreed with this course of action.”

6. Concerning the first full paragraph on page 4, which begins, “NYCDEP officials told us...”, the paragraph is somewhat inaccurate in that there never was a certification program to determine the level of compliance with NYCDEP instructions concerning cleaning of privately owned buildings. Also, the paragraph does not reflect the proactive efforts of the NYCDEP and the fact that NYCDEP not only told EPA it cleaned all of the rest of the buildings, but provided documentation. The City suggests that the first sentence be revised to read, “NYCDEP officials told us they did not create a certification program, nor did they have authority to create such a program, to determine the level of compliance with their instructions regarding the testing and cleaning of asbestos inside buildings, unless a complaint was made or an asbestos notification was filed with the City.” The City suggests that an additional sentence be added that states, “However, NYCDEP made significant efforts, including establishing an additional “hotline” to insure that residents could obtain information concerning asbestos cleanup and could report any asbestos related problems.” We suggest that the last sentence of the paragraph be revised to read, “NYCDEP officials provided documentation that the remaining buildings were cleaned by NYCDEP with FEMA funding.”

7. With respect to the first full paragraph on p.5, which alleges that New York City officials told EPA that the City would be requesting EPA assistance with respect to sampling and reoccupation issues, without further information such as: who the New York City officials were, or even what New York City agency they represented it is impossible for the City to confirm or deny the allegation. Again, the City at that time was willing to accept all authorized federal assistance. Moreover, as shown in the documents submitted by the City, the City had accepted U.S. Public Health assistance in conducting indoor air sampling. Thus, it would be inconsistent for the City to refuse EPA, another federal agency, assistance in this matter. The City has already commented concerning the alleged statement made on September 30, 2001, which is referenced in this paragraph and will not reiterate its comments. The City recommends that the two sentences that refer to the statements allegedly made on October 9, 2001 and September 30, 2001 be deleted.

8. The City believes that the paragraph labeled **“Multi-Agency Residential Cleanup Undertaken”** on page 5 is somewhat misleading. The second sentence suggests that the sole basis for EPA’s involvement in indoor air in February 2002 was that it believed that the City could not handle all of the issues involved in this matter. This is not completely accurate. First, EPA did not just become involved in indoor issues in February 2002. As shown by the documents submitted by the City, EPA was involved in indoor air issues as early as September 29, 2001. Second, there were a number of events that coalesced around February 2002 that brought about more involvement in indoor issues by the EPA, including, perhaps most importantly, federal funding for indoor cleaning for private residences. Therefore, the City recommends that the second sentence be deleted.

9. The first paragraph in the section labeled **“EPA Role on In Indoor Environment”** is misleading. refers to the portion of the NCP which allows a state or local agency to take the lead role in the case of a hazardous substance release. However, in this case, there was no hazardous

substance release. We recommend that a footnote be added to this sentence noting that there was no hazardous substance release.

10. In the first paragraph of the sub-section labeled "**Cleaning Instructions**", the report opines that as a result of failure of the City to recommend that residents obtain professional cleaning, long term health risks may have been increased for individuals, who cleaned their residences without using respirators and other professional cleaning equipment. This is speculation that is not supported by the evidence. As mentioned previously, the indoor sampling conducted by a number of entities, including the U.S. Public Health Service and the City in responding to asbestos complaints, indicates that asbestos contamination was virtually non-existent. Consequently, asbestos abatement procedures were not required and the methods recommended by the City were perfectly appropriate. Accordingly, we recommend that this paragraph be deleted.

11. The last paragraph in this section is also inaccurate. The City strongly contests the current opinion of asbestos medical experts contained in the first sentence of this paragraph. First, asbestos contamination was virtually non-existent. Thus, not only is it misleading to state that there were asbestos contamination levels found, but the absence of levels of contamination does not support the conclusion of the experts. Also, the conclusion of the experts completely ignores the practicality of the situation, in that for respiratory protection to be effective, the user must be fit tested first and also that it is medically dangerous for an individual to wear a respirator without being medically cleared. Finally the last two sentences of the paragraph are sheer speculation, which should not be in an inspector general report. There is no evidence as to how the individuals cleaned their residences. More importantly, as noted previously, there is no evidence of asbestos contamination to support requirement to use abatement procedures and to support speculation that if abatement procedures were not used, health risks would be increased. Accordingly, this paragraph should be deleted.

12. The City notes that page 7 provided to the City is blank.

13. As a technical correction, the City notes that in the first paragraph on the page, the New York State Department of Labor, not the Department of Environmental Conservation is delegated the responsibility for implementing federal regulations under the NESHAP program.

14. Concerning the first full paragraph on page 9 of the draft report, the City believes that given the prominent mention of the NESHAP notification requirement, this paragraph should include a sentence indicating that the EPA because of its involvement had functional notice of the demolition and everything concerning the demolition and that as a practical matter, notification would have changed the manner in which demolition was conducted. actions would have been conducted. We recommend that the following sentence be added at the beginning of the paragraph, "While the EPA and other agencies were not provided formal written notice of the WTC demolition activities, the EPA and other regulatory agencies had notice, in advance, of the demolition activities and the manner in which they were being conducted as a result of the EPA's involvement in the Response Effort. EPA did not object to these activities and even if formal written notification was provided, the activities would not have been conducted in any different manner."

15. As the only asbestos containing material encountered at the WTC site was below grade, the City recommends that the first sentence of the first paragraph on page 10 be revised to read, "Both NYCDDC and EPA officials told us that asbestos containing material (e.g., pipe wrapping, steel insulation) was only encountered below grade, and when it was encountered during removal, it was tested and treated in accordance with asbestos abatement procedures."

16. The City recommends that the last sentence of the footnote on page 11 be modified to provide a more complete explanation. The sentence should read, "Furthermore, they stated that the vehicles did not require decontamination since this was not a hazardous material situation and while decontamination procedures were not required, wash down procedures were mandated."

17. The first paragraph in the section labeled "**Transfer of Debris to Barges**" on page 12 is misleading and unfairly prejudicial to the City. This section is not based on substantial evidence. The testimony of people complaining must be evaluated very carefully. This has not been done in this report. The report, without any critical evaluation at all, seems to accept all of these complaints as true. The other evidence available, however, suggests that the complaints are unfounded. There is testimony that is true. The trucks transporting WTC debris were not marked as carrying hazardous waste. They were not marked in this manner because they were not carrying hazardous waste. This is just one example where testimony should have been critically evaluated before including it in the report. Of more concern is the uncritical acceptance of testimony of trucks not being wetted down properly and trucks not being covered properly, both resulting in the release of dust. The area around Stuyvesant High School was among the most thoroughly monitored in the City. There is no data to show that this area was contaminated by the operation of the transfer station from trucks to barges in the vicinity of the High School. Thus, if there was a release of dust, it was so insignificant as to present no risk at all to health and safety and should not be highlighted in this report. EPA itself, represents that air sampling concerning barge operations indicated that 99.83% of the samples were below the screening levels. The City consequently recommends that this paragraph be deleted.

18. The paragraph that begins at the bottom of page 12 should be modified. The last sentence reports that there was lead found in the ventilation system of Stuyvesant High School. The sentence also reports that it was not determined whether this lead was from WTC fallout. Given the dearth of air samples that were positive for lead and the fact that lead is unlikely to travel far as an airborne particulate, it is very unlikely that the lead found in the ventilation system was from WTC fallout. Even if it was, this has nothing to do with the City's response to the terrorist attacks on the World Trade Center. While this may be of some academic interest, it has no place in this part of the report. The City recommends that this sentence be deleted.

19. The first paragraph in the section labeled "**Asbestos Levels During Demolition and Debris Removal**" is misleading. It unduly emphasizes that after September 2001 there were 7 air monitoring samples which exceeded the AHERA standard. It does not mention that there were approximately 40,000 samples taken during this period. Considered in this context, the fact that there were only seven exceedances demonstrates that the danger from asbestos was, in essence, non-existent. The report not only does not draw this conclusion, which is warranted, but it mischaracterizes the seven exceedances as showing the sporadic presence of asbestos in the ambient air. Given the extensive monitoring, less than one exceedance per month can hardly be

characterized as sporadic. We recommend that the paragraph be revised to delete the table showing the exceedances and any reference to the table be deleted. And, also reference that two of the exceedances were near Stuyvesant High School. Reference to Stuyvesant implies that this location should be given preference over other locations near the site. The fourth sentence of the paragraph should be revised to read, "Out of approximately 40,000 samples taken from October 2001 through May 2002 there were only seven exceedances of the AHERA standard." The seventh sentence should be revised to read, "The above information shows the virtual non-existence of asbestos in the ambient air in publicly accessible locations at levels of concern established by EPA for the WTC response (i.e., the AHERA standard) from October 2001 to May 2002."

20. The second full paragraph on page 20 beginning, "The indoor residential cleanup program" is inaccurate. The second sentence states that the Governor of New York did not declare a public health emergency. Although the Governor did not declare a public health emergency, he declared a "general emergency", which is construed to include a public health emergency. Also, the fourth sentence states that the City indicated that an indoor cleanup was not necessary. This is not correct. At no time did the City indicate that an indoor cleanup was not necessary. In fact, early in the "Response Effort", the City inquired concerning the availability of federal funds to pay for such a cleanup. The City accordingly recommends that the second sentence be modified to delete the phrase, "and the Governor of New York did not declare a public health emergency for this incident." We recommend that the fourth sentence of the paragraph be deleted.

Thank you for the opportunity to comment concerning the revised draft report. If you have any questions, please do not hesitate to contact me or my staff.