

Dragon, Karen E. (CDC/NIOSH/EID)

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To: NIOSH Docket Office (CDC)
Subject: 223 - Emergency Responder Health Monitoring and Surveillance
Attachments: NYCOSH comments re NIOSH ERHMS 032811.pdf

Please see NYCOSH comments in attached pdf document.

Will also send hard copy via US mail.

Thank you.

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Comments Re:

Guidance Document:
Emergency Responder Health Monitoring and Surveillance

Docket Number NIOSH-223

submitted by
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March 28, 2011

The New York Committee for Occupational Safety and Health (NYCOSH) appreciates this opportunity to comment on NIOSH's draft guidance document *Emergency Responder Health Monitoring and Surveillance, Draft 1.2*, docket number NIOSH-223.

NYCOSH is an independent non-profit organization that has provided technical assistance and comprehensive training in occupational safety and health to unions, employers, government agencies, and community organizations for over 30 years.

Beginning with the tragic events of September 11, 2001 and continuing until the present, NYCOSH has worked extensively on World Trade Center-related occupational and environmental health issues. We have collaborated closely on these issues with unions and employers and with non-profit, immigrant, community, and tenant organizations at Ground Zero and throughout Lower Manhattan. In partnership with the United Church of Christ, Disaster Response Ministries, our work has included outdoor and indoor environmental sampling, identification and assessment of exposure scenarios, risk assessment of mass transit facilities under and around Ground Zero, evaluation of the safety and healthfulness of affected workplaces and residences, and technical assistance

with the design and assessment of sampling, cleanup, and re-occupancy protocols and with building ventilation and filtration issues. NYCOSH, in collaboration with the Queens College Center for the Biology of Natural Systems and the Latin American Workers Project, operated a mobile medical unit near Ground Zero which provided medical screenings to hundreds of immigrant day laborers engaged in the cleanup of contaminated offices and residences. We also provided respirators to these cleanup workers, along with change-out filter cartridges, fit-testing, and training in proper respirator use. NYCOSH trained additional hundreds of Lower Manhattan workers about 9/11-related occupational and environmental health issues. NYCOSH has worked closely with health care providers and with unions, employers, tenant and community organizations, and elected representatives to ensure that their constituents are informed about and have access to appropriate medical care for 9/11 health conditions. NYCOSH's executive director, Joel Shufro, serves on the board of the World Trade Center (WTC) Medical Monitoring and Treatment Program.

As NYCOSH's industrial hygienist, I had the privilege of serving on the EPA World Trade Center Expert Technical Review Panel. I also served on the Exposure Assessment Working Group of the World Trade Center Worker and Volunteer Medical Screening Program and on the Advisory Board of Columbia University's Mailman School of Public Health World Trade Center Evacuation Study. Additionally I served on the Community Advisory Committee of the New York City Health and Hospital Corporation's World Trade Center Environmental Health Center and on the Labor Advisory Committee of the New York City Department of Health and Mental Hygiene's World Trade Center Health Registry. I also served on the Community Advisory Committees for the Deutschebank and Fiterman Hall demolitions.

NYCOSH offers the following comments on the ERHMS document, based largely on our nine and a half years of experience with 9/11-related response efforts and associated environmental health concerns, but also based on our (long-distance) interaction with organizations and individuals active in Katrina and BP response efforts.

The draft ERHMS document offers a much needed and long overdue guidance tool for institutionalizing methods to facilitate rostering and medical monitoring and surveillance of workers engaged in disaster response efforts. As such, it represents a significant and welcome step forward, even absent any revision prior to finalization of the document.

It is clear that the intent of the ERHMS document is to address “gaps and deficiencies”¹ regarding rostering, monitoring, and surveillance within the context of the Incident Command System (ICS), and not necessarily to examine broader issues pertaining to disaster response. ICS aims to provide an effective generic structure, chain of command, and division of labor applicable across diverse disaster response scenarios. We believe, however, that efforts to better address worker medical issues within the ICS rubric are likely to be most effective when informed by the broader policies and conditions which can impact both ICS operations and worker health.

We believe that the ERHMS document is too narrowly targeted. It misses an opportunity to jump-start consideration of the risk factors that contribute to the necessity for medical monitoring and surveillance. Stated differently, the document focuses on the very real need for improving mechanisms for identifying, tracking, and presumably ameliorating health harm that results from disaster response operations. At the same time, it does not adequately consider the “gaps and deficiencies” in identification and control of the risk factors that contribute to causing harm. The document would benefit from expanded attention to how and why harm occurs and to its prevention.

1. The Pre-Deployment, Deployment, Post-Deployment Phase Model

The 3-stage ERHMS disaster response model may not adequately capture all response populations that warrant medical consideration.

The ERHMS document anticipates a rapidly implemented incident command system and a professionalized response force. While we share this scenario as a goal, we are concerned that it remains somewhat idealized in the context of response to catastrophic disasters.² Inadequate attention is devoted to the means by which these yet-to-be achieved goals are to be realized. Until they are realized, we must acknowledge that there

¹ ERHMS document, page i.

² For example, health and safety training was not implemented at Ground Zero until several weeks after September 11, 2001. A Health and Safety Plan (HASP) was not implemented until October 29, 2001.

have been and will continue to be additional populations engaged in disaster response. These “non-traditional” responders operate outside the ICS framework but may encounter many of the same risk factors, exposure scenarios, and health impacts as more traditional first responders and skilled support personnel.

The scope of ERHMS planning should be expanded to encompass, in addition to first responders and skilled support personnel, a more broadly defined disaster response population whose health may be at risk because of the tasks they perform, whether or not they operate under the ICS umbrella.

Our WTC experience indicates that thousands of workers and volunteers may become involved in a spontaneous rescue effort that occurs prior to the establishment of a secure exclusion zone and effective implementation of the ICS. This population may include groups of workers assigned and dispatched by their employer³ as well as individual workers and other volunteers.

Additional hundreds or thousands of workers will engage in restoration of essential services such as transportation, telecommunications, electricity, water, sanitation, etc. After 9/11, these highly-skilled unionized workers engaged in work activities that regularly disturbed potentially harmful WTC-derived dust and debris in indoor and outdoor spaces which had not been tested or remediated. In general, they were not provided with health and safety training, respiratory protection, or other personal protective equipment (PPE).

Additional hundreds of workers will engage in secondary cleanup of debris and contaminants in impacted commercial, institutional, and residential buildings and in outdoor spaces such as parks and playgrounds. After 9/11, these workers included unionized building maintenance and janitorial crews as well as contractors that utilized a largely immigrant day laborer work force. Neither of these groups received health and safety training or PPE.

³ For example, it has been reported that on the afternoon of September 11, 2001, New York City Transit mobilized 3,000 to 4,000 welders, heavy equipment operators, track workers, and others, provided them with heavy equipment and marine transportation, and deployed them to Ground Zero for days or weeks. (There exists no roster of these workers.)

All of the above groups are well-documented as experiencing health impacts similar to those of WTC first responders and skilled support personnel. These response groups also warrant detailed inclusion in ERHMS planning.

2. Exposure Assessment

If we learned just one thing from our WTC response experience, it would be that an over-reliance on environmental sampling data can be misleading and dangerous. There has been a fundamental disconnect between what the majority of the data would seem to indicate and the breadth of health issues that have arisen. WTC-related illnesses manifested in the absence of, or contrary to, traditional methods of data collection and assessment. Despite reassuring characterizations of sampling results, tens of thousands of WTC responders, area workers, and residents incurred significant and persistent respiratory and other illnesses. Their exposures were largely unnecessary & avoidable.

NYCOSH agrees with the authors of Chapter 7 of the ERHMS document, who write:

A holistic approach to investigating and understanding the impact of exposures on responder health should be adopted—one that does not rely on environmental results alone to determine risk. Information must be gathered from a variety of sources ... to determine if exposures occurred, who may have been exposed, and who needs medical treatment...⁴

This vitally important concept deserves additional emphasis and development in the ERHMS document.

NYCOSH believes that sampling data are best evaluated in the context of comprehensive qualitative exposure & hazard assessments. Even prior to initial physical access to the site for purposes of environmental sampling and site characterization, information about the potential presence of toxic substances may be rapidly available from federal databases covering Toxic Release Inventories and the hazardous chemical storage reporting

⁴ ERHMS document, page 34.

requirements of the federal Emergency Planning and Community Right to Know Act.⁵ Targeted bulk, wipe, and air sampling should be conducted for harmful substances known or presumed to be present, regardless of regulatory status, so that decisions concerning worker safety and health can be made with the best available information.

Sampling results must be supplemented by industrial hygiene assessments which consider work conditions, work activities, and exposure scenarios, including both typical and worst-case scenarios for response tasks. Exposure assessments should be *narratives informed by data*, not just data. These narratives should identify substances of concern and their hazards, tasks performed and equipment and tools utilized, disturbance activities and exposure scenarios, and protective measures to be utilized through the entire hierarchy of controls of hazards, as feasible.

3. Utilize the Precautionary Principle

Disaster response workers may be exposed to an unknown, unquantifiable, or changing array of toxic substances. Imperfect information or lack of full scientific certainty should not be used to justify avoidance or delay of measures aimed at protecting workers or preventing environmental degradation. We should assume risk and take protective measures appropriate for worst case scenarios unless and until evidence indicates that protective measures may be scaled back.

The ERHMS document should reference the Precautionary Principle: "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically..."⁶

⁵ Had response agencies accessed government databases on September 11, 2001, they would have learned, for example, of the probable presence of barium, lead, chloroform, chlordane, carbon tetrachloride, cadmium, chromium, mercury, hydrogen sulfide, arsenic, and other toxic raw materials at the United States Customs Service, 6 WTC, and of mercury, tetrachloroethylene, PCBs, arsenic, ethane, and other toxic raw materials at the Port Authority of New York and New Jersey, 1 WTC.

⁶ Wingspread Statement on Precautionary Principle, January 1998.

4. The Hierarchy of Controls of Hazards

The authors of Appendix B accurately observe that “the control strategy hierarchy is identical to any general industry or construction hierarchy of controls. *However, because of the nature of an emergency incident, the predicted use is reversed.*”⁷ (emphasis added)

However, just as the goal of the ERHMS document is to “raise the bar” with regard to health monitoring and surveillance, we should also endeavor to raise the bar with regard to more rapid and effective use of the hierarchy of controls paradigm.

The ERHMS document should stress the desirability of moving up toward the high end of the hierarchy as quickly as possible, with emphasis on hazard elimination, where practical. In this regard, the document would benefit from detailed discussion and examples. See, for example, Eileen Senn’s proposals,⁸ below, for integration of the entire hierarchy into the BP response effort:

Elimination: Minimize:

- Use of dispersants and cleaning agents
- Burning of oil
- Engine idling
- Tasks with high exposures and questionable usefulness like cleaning of wildlife. (Experts say only 1 percent of cleaned and released wildlife survives.)

Substitution: Least toxic

- Dispersants
- Diesel fuel (low sulfur)
- Cleaning agents
- Insect repellants
- Pesticides

Engineering

- Mechanize work
- Remove oil by vacuum rather than water spray
- Long-handled hand tools to keep workers’ noses further from contamination
- Catalytic converters on gasoline engines

⁷ ERHMS document, page 171.

⁸ Eileen Senn, personal email, June 15, 2010.

- Crankcase controls on diesel engines
- Engine maintenance and tune-up

Ventilation:

- Keeping workers downwind of sources
- Air conditioned and HEPA and carbon filtered air for living and sleeping quarters, control rooms, equipment cabs, break rooms
- Fans for cooling (effective only under 95 F) and to dilute air contaminants, for example, on the decks of ships

Administrative:

- Perform work when there is minimal heat and solar load – sunrise until 11 AM, 7 PM to 11 PM and even overnight. Reduces both heat stress and evaporation of chemicals.

5. Respiratory Protection and Length of Work Shift

Reliance on respirators is the weak link in disaster response worker protection. PPE, including respirators, is the least effective component of the hierarchy of controls because the hazard remains in place and because the potential for human error, which could compromise protection, is high.

Poor respirator design can cause communication difficulties as well as discomfort and sweating. These latter conditions may result in respirator slippage, compromising the seal and endangering the wearer. These disincentives to respirator use can also provoke deliberate removal of the respirator by the user.

In addition, the conditions under which respirators are typically used during disaster response often include heavy exertion and extended work shifts. At Ground Zero, 12-hour shifts and 7-day work weeks were the norm. Respirator use is unlikely to remain effective over such long work shifts and under such physically demanding conditions.

Consequently, there is a pressing need for the redesign of respirators to enhance comfort and communication capability. Until that happens, tours of duty should be limited in length and number to minimize fatigue and stress, to promote safe work practices, and to facilitate effective utilization of respiratory protection. It may not be significantly more difficult in terms of logistics to field 3 eight hour tours of duty rather than 2 twelve hour

tours, while the benefits in terms of productivity, respiratory protection, and injury, illness, and stress reduction are likely to be substantial.

The ERHMS document should note the shortcomings of respirators and should advocate for proper respirator training and usage, rapid movement up the hierarchy of controls, where feasible, redesign of respirators for comfort and communication, and limits on the length of work shifts.

The document should reference the OSHA General Personal Protective Equipment Sampling Matrix⁹ developed for use in the Gulf BP cleanup and recommend that this approach be utilized for application to respiratory protection in disaster response efforts generally.

In addition, the document should promote the establishment of rapidly accessible regional caches of respirators and other PPE.

6. Rostering, Medical Monitoring, Surveillance, and Treatment

The ERHMS document could be strengthened by additional attention to how monitoring is to be conducted during and post deployment as well as how surveillance is to be conducted. In addition, clarification is needed of the mechanism or process for coordination of post-deployment health monitoring and surveillance.

A union membership category should be added to rostering and other forms to document union name and local union number.

The centralized roster database should be maintained by government or independent medical agencies rather than by employers or corporate entities.

The targeted attention in the document to medical monitoring and surveillance, entirely appropriate and long overdue, begs the question of access to treatment.

⁹ www.osha.gov/oilspills/oil_ppematrix.html.

In catastrophic disasters, responder health issues may deplete the financial or medical resources of union- or employer-funded medical insurance plans or clinics. Many workers, especially immigrant day laborers, may be under-insured or uninsured, and may effectively have little or no access to the health care system.

Responders must be afforded access to expert and long-term medical care, if necessary.

Neither the existing market-based, fee-for-service health care model nor the workers compensation system has proved effective at providing adequate access, screening, or treatment for the adverse health outcomes associated with 9/11-environmental exposures. Health care providers in general do not possess the expertise to identify environmentally induced symptoms and illnesses, to associate them with disaster-related exposures, or to render effective treatment or appropriate referrals. They provide, at best, "fragmented treatment by non-experts."¹⁰ There is a need, in catastrophic disaster situations, for clinic- or hospital-based "centers of excellence" to engage in targeted outreach and public health education, appropriate medical monitoring and treatment, identification of late-emerging disease, and collection and sharing of data to inform clinical practice and public health policy.

Our experience post-9/11 is that impacted populations, including disaster responders, will not have confidence in government or responder agencies unless there is a clear commitment to medical treatment, where warranted.¹¹ It is impossible to overstate this issue. The ERHMS document must substantively address the issue of access to expert medical care. While there can be no expectation that the document can solve this nation's health care problems, the document cannot be credible unless it confirms the problem of access to medical care for responders (broadly defined), acknowledges the challenges, and proposes solutions. Although rostering, monitoring, and surveillance are each essential, neither separately nor together do they address the fundamental issue of

¹⁰ David Prezant, M.D., Chief Medical Officer, Fire Department of New York.

¹¹ Similarly and just as importantly, disaster-impacted populations will not have confidence in government or responder agencies unless there is a clear commitment to remediation of environmental contamination, where warranted.

access to medical care.

7. Enforcement

The ERHMS document contains approximately 60 references to OSHA.¹² Not a single one addresses the agency's actual role in disaster response. While the document's authors may assume, and responders may expect, that the strong worker protections and employer responsibilities required by applicable OSHA standards will be in place to safeguard disaster responders, in fact OSHA's role in disaster response has been fairly circumscribed.

OSHA has asserted that the Federal Response Plan in place in 2001 required it to emphasize consultation, guidance, and technical assistance. Consequently the agency declined to enforce applicable standards at Ground Zero. However, the FRP did not exclude enforcement. The problem with the consultation approach was not that it was inappropriate but rather that it was ineffective. OSHA chose to operate under a zero enforcement policy which ultimately facilitated rapid debris removal at the expense of protection of worker health. At no time did a collaborative approach preclude enforcement, apart from the initial hours and days when rescue of live victims was theoretically possible.

This policy of reliance on voluntary compliance to the exclusion of enforcement was instituted after the Exxon Valdez oil spill and formalized after 9/11.¹³ It remains in place today.

The consequences of this policy were that applicable protective standards were not enforced at Ground Zero. More importantly, the worker protection requirements of these standards often were not implemented, arguably putting workers at unnecessary and avoidable risk. Applicable standards included the Respiratory Protection Standard,¹⁴ the

¹² Referring either to the Occupational Safety and Health Administration or to the Occupational Safety and Health Act.

¹³ OSHA Directive HSO 01-00-001, December 18, 2003.

¹⁴ 29 CFR 1910.134, 29 CFR 1926.103.

Hazardous Waste Operations and Emergency Response Standard,¹⁵ the Hazard Communication Standard,¹⁶ and the Access to Employee Exposure and Medical Records Standard.¹⁷ (Similarly, EPA declined to consider the WTC site as either a hazardous waste site under the Resource Conservation and Recovery Act [RCRA] or a Superfund site under the Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA].)

The enforcement/non-enforcement issue has been controversial, with most attention focused on either end of the continuum (i.e., consultation only with no enforcement or enforcement only with no consultation). In the emergency context of disaster response, neither extreme is likely to be adequately effective. A more useful approach would be to have the agency replicate the role of the “competent person” in construction:

one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.¹⁸

Authorization is generally interpreted as the *ability, responsibility, and will* to stop work when necessary to protect workers. In this analogy, for OSHA this would mean consultation when effective and enforcement of applicable standards when necessary.

The ERHMS document should acknowledge current limitations on OSHA’s role in disaster response and should call for an expanded and proactive role for the agency, up to and including enforcement.

8. Exposure Limits and Benchmarks

OSHA’s permissible exposure limits (PELs) for chronic inhalational exposure to approximately 470 substances are largely based on outdated 1960s data. A number of

¹⁵ 29 CFR 1910.120, 29 CFR 1926.65.

¹⁶ 29 CFR 1910.1200, 29 CFR 1926.59.

¹⁷ 29 CFR 1910.1020.

¹⁸ 29 CFR 1926.32 (f).

these substances are known or presumed carcinogens. However, their PELs are inappropriately low because the exposure limits are based only on less hazardous, non-cancer effects. Many known carcinogens, such as dioxins and diesel exhaust, as well as other substances known to be hazardous, are not regulated at all.

The ERHMS document acknowledges the existence of significant gaps in the regulatory framework for worker protection against inhalational hazards. It would be helpful if the document could also explicitly address the need to update the PELs and indicate as well the need to develop acute and sub-chronic inhalational exposure guidelines.

The document would benefit from discussion of the strengths, limitations, and potential uses of diverse occupational exposure limits (OELs), including but not limited to:

- OSHA Permissible Exposure Limits (PELs)¹⁹
- NIOSH Recommended Exposure Limits (RELs)²⁰
- ACGIH Threshold Limit Values (TLVs)²¹
- AIHA Workplace Environmental Exposure Levels (WEELs)²²
- EPA Acute Exposure Guideline Levels (AeGL)²³
- AIHA Emergency Response Planning Guidelines (ERPGs)²⁴
- US DOE Temporary Emergency Exposure Limits (TEELs).²⁵

9. The Rescue Phase

OSHA and other agencies allowed the rescue phase at Ground Zero to be artificially prolonged for 9 months. This extended rescue phase was an impediment to implementation of safe work practices, compliance with regulatory requirements, and enforcement.

¹⁹ www.osha.gov/SLTC/pel/index.html.

²⁰ www.cdc.gov/NIOSH/92-100.html.

²¹ www.acgih.org/TLV/.

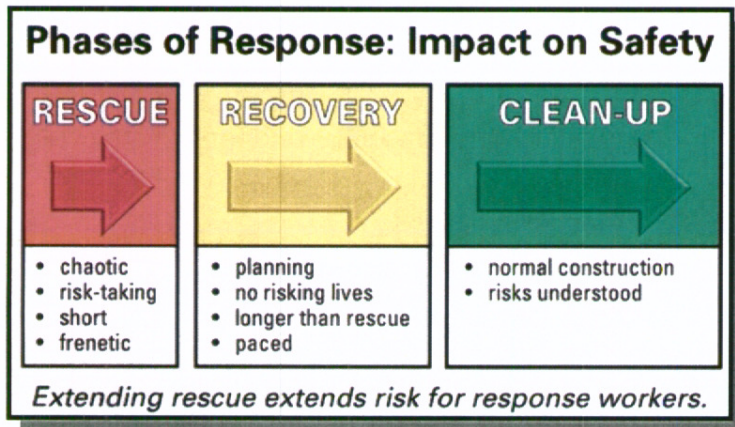
²² www.aiha.org/foundations/guidelinedevelopment/weel/Pages/default.aspx.

²³ www.epa.gov/oppt/aegl/.

²⁴ www.aiha.org/foundations/guidelinedevelopment/erpg/Pages/default.aspx

²⁵ www.atlintl.com/DOE/teels/teel.html.

The literature indicates that building-collapse victims who are not extricated within 12 to 48 hours have a fairly low survival rate, which declines to virtually zero after 4 days.^{26,27} Thus survival times of trapped building-collapse victims are measured in days, not weeks or months.



Graphic developed by Dr. Bruce Lippy

While efforts to protect environmental and occupational health during disaster response must never come at the expense of immediate rescue efforts, the duration of the rescue phase itself must be informed by science rather than by politics or emotion. The rescue phase must have a realistic time limit, determined by

site-specific conditions and the nature of the disaster event.

The ERHMS document would benefit from inclusion of a discussion of this issue.

10. Training

The ERHMS document appropriately places strong emphasis on training, including training as “critical for the preparedness of the responder,” “training regarding hazards to be anticipated and protective measures to mitigate them,” and training on “site-specific hazards, operating procedures, and available resources.”²⁸

NYCOSH believes that comprehensive emergency preparedness and response training

²⁶ D. Guha-Sapir, M. Carballo. Medical Relief in Earthquakes. *Journal of the Royal Society of Medicine*. Vol. 93, February 2000.

²⁷ M. Bruycker, D. Greco, et al. The 1980 Earthquake in Southern Italy: Rescue of Trapped Victims and Mortality. *Bulletin of World Health Organization*. Vol. 61, No. 6, 1983.

²⁸ ERHMS document, pages 11, I, and iii.

must be provided to *an expanded worker population* of designated and potential responders, along with periodic refresher training. Last-minute, site-specific training should serve to reinforce concepts already learned.

All workers involved in disaster response efforts, including those worker groups mentioned in Section 1, above, who may operate outside the ICS framework, must be trained about the hazards they may encounter. Training should provide workers with a basic understanding of job hazard analysis principles and process. It should equip workers with the ability to understand and evaluate site-specific assessments conducted by occupational safety and health or environmental professionals. It should emphasize their rights to access to such assessments. It should cover the hierarchy of controls of hazards. Training should emphasize precaution – i.e., assumption of and protection against worst case exposure scenarios, to be scaled back as data and assessments demonstrate the safety of doing so.

Workers must also be trained in specific standards applicable to their protection during disaster response. Training should include components of these and other standards: Hazard Communication, Respiratory Protection, Personal Protective Equipment, Hazardous Waste Operations and Emergency Response, and Access to Employee Exposure and Medical Records, with emphasis on worker rights under these standards. Training should be in a language and at a literacy level understandable by the workers involved.

Our experience, however, is that employers tend to be resistant to advance training (or often to any training) due to various constraints, not the least of which are expense and lost work time. The call for more extensive training might benefit from an acknowledgment of these obstacles and a discussion of possible ways to overcome them.

11. Immigrant Workers

Immigrant and other temporary workers recruited for disaster cleanup require additional attention and protection. In 9/11 response efforts, immigrant and temporary workers were the least likely to receive proper training and respiratory protection or to have medical

insurance. As a result, they incurred high rates of illness without early access to medical surveillance & treatment. In addition, they were often the victims of wage and hour crimes. The ERHMS document should include increased focus on the issue of immigrant workers in disaster response.

12. Risk Communication and Public Participation

Additional discussion of risk communication would serve to strengthen the ERHMS document.

Risk communication should follow the precepts delineated in EPA's *Seven Cardinal Risks of Risk Communication*, including:

- Accept and involve the public as a legitimate partner...
- People and communities have a right to participate in decisions that affect their lives...
- The goal of risk communication in a democracy should be to produce an informed public that is involved, interested, reasonable, thoughtful, solution-oriented, and collaborative; it should not be to diffuse concerns or replace public action...
- If you do not listen to people you cannot expect them to listen to you. Communication is a two-way activity.²⁹

The ERHMS document implicitly fails to adequately characterize or acknowledge the concerns and capabilities of disaster-impacted populations, including but not limited to responders and cleanup workers. Our World Trade Center experience showed that impacted communities can rapidly build broad-based coalitions and develop remarkably high levels of technical expertise. Frank, timely, and accessible risk communication and other information are essential but are not sufficient. Response organizations and agencies must acknowledge the need for two-way communication with impacted communities and populations. They must formalize a participatory, transparent process for active community involvement.

This process should be informed by the principle of community-based participatory

²⁹ EPA. *Seven Cardinal Risks of Risk Communication*. OPA-87-020, April 1988.

research (CBPR) - "an approach that promotes active community involvement in the processes that shape research and intervention strategies, as well as in the conduct of research studies."³⁰ Such a process should provide for open and meaningful participation by all impacted stakeholders, including labor, business, and community. It may include regular, open, participatory public meetings, oversight panels, advisory boards, or task forces, with experts and representatives chosen by or from impacted communities, as well as public hearings hosted by government agencies or elected officials.

Trust cannot be achieved unless all data are made publicly available without restriction.³¹

³² Unfiltered data should be posted on the web in a timely manner. Workers and unions must explicitly retain their legal right to access to all sampling data per 29 CFR 1910.1020, regardless of partnership agreements or off-shore jurisdictional issues.

13. Goals in disaster response

Perhaps one reason why it continues to be difficult to assess and learn from the challenges of WTC response efforts and from subsequent response efforts is that there appears to exist no clear, explicit, and succinct delineation of goals in disaster response. Lacking consensus on such a yardstick, how are we to plan, implement, and evaluate response efforts, protect workers, design effective medical monitoring and surveillance, or determine the proper role of the Incident Command System in various aspects of disaster response? NYCOSH suggests the following as a starting point for consideration of a short but comprehensive list of disaster response goals:

³⁰ National Institute of Environmental Health Sciences, *Environmental Justice and Community-Based Participatory Research*.

³¹ For example, EPA withheld for one year sampling results obtained in the 3 months after 9/11 which indicated that outdoor concentrations of dioxins outside Ground Zero were "likely the highest ambient concentrations [of dioxins] that have ever been reported." (U.S. Environmental Protection Agency, National Center for Environmental Assessment. *Exposure and Human Health Evaluation of Airborne Pollution from the World Trade Center Disaster*. EPA/600/P-2/002A, October 2002)

³² In another example, NYC DEP in November 2006 posted data indicating elevated outdoor levels of asbestos blocks from Ground Zero in September 2001. DEP noted that these data had been "inadvertently" omitted from its website for the prior 5 years. (http://nyc.gov/html/dep/html/asbestos/airmonit_wide.shtml)

- A. *Rescue of trapped, injured, and at risk live victims.*
- B. *Site characterization and hazard assessment, with initial (but not exclusive) emphasis on known and potential IDLH hazards.³³*
- C. *Do no additional harm - protection of worker health, public health, and the environment through hazard mitigation, including effective removal of environmental contaminants.*
- D. *Retrieval of deceased victims.*
- E. *Reorganization of essential services, debris removal, and return to normalcy.*

The above list is not intended to be all-inclusive but rather to serve as a starting point for building a consensus list. Depending upon site-specific circumstances, some or all of the above goals may be addressed in the order listed, in another order, or concurrently.

Discussion of disaster response goals should introduce and inform the ERHMS document. Reference to response goals should motivate discussion of ICS operations in all phases and aspects of the response effort.

Thank you for this opportunity to comment on the draft ERHMS document.

³³ In this instance, NYCOSH proposes using Immediately Dangerous to Life or Health (IDLH) to refer to both the OSHA Respiratory Protection Standard definition ("an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere") *and* the OSHA Permit-Required Confined Space Standard definition ("any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a ... space").