

Worker Safety and Health Training Needs in the Gulf Coast Area

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This paper aims to define the populations that will be working in the Gulf Coast in the aftermath of Hurricane Katrina, and outline the safety and health training needs based on the tasks being performed and hazard exposure assessments.

Hurricane Katrina, which made landfall in the Gulf Coast region on August 29, 2005, left nine categories of environmental problems in her wake:

- Flooded and contaminated drinking water supplies
- Several oil spills, typically from above-ground tanks
- Leaking underground tanks containing fuel and other chemical
- Flooded sewage treatment plants
- Flooded buildings, lagoons, lots and individual containers containing a wide array of toxic chemicals that were washed out into the ambient environment
- Concentrated residue of many fires spread into the environment
- Building debris that is cultivating harmful molds
- Contaminated sediment and other sludge throughout the city, which includes toxic metals, industrial compounds, petroleum byproducts and a banned insecticide
- Toxic exposure of cleanup and other workers as a result of this pollution¹

The Army Corps of Engineers is planning one of the biggest environmental cleanups ever attempted: scraping miles of sediment laced with cancer-causing chemicals from New Orleans' hurricane flooded neighborhoods.² More than ten weeks after Hurricane Katrina, the extent and level of contamination has still not been clearly assessed.

The Environmental Health Needs and Habitability Assessment Joint Taskforce (CDC and EPA) found that there is a complex array of environmental health problems that exist in New Orleans. The team identified 13 environmental health issues and supporting infrastructure to address and identified solid waste/debris and sediments/soil contamination (toxic chemicals) as nearly the most complex and time consuming to cleanup.³

Hazardous waste operations and emergency response (HAZWOPER) training is the most widely provided training that has pertinence to the aftermath of hurricane Katrina and it covers cleanup workers (per 29 CFR 1910.120(e), RCRA/TSD workers 1910.120(p), and emergency responders 1910.120(q)) who are exposed or who face the reasonable possibility of exposure to chemicals, biological agents, or radiological hazards during their work. HAZWOPER is clearly applicable to many conditions and sites in the Gulf cleanup, although the entire area is not and should not be considered covered by HAZWOPER. NIEHS WETP awardees have been developing and delivering state-of-

the-art quality HAZWOPER training in accordance with a mandate under SARA since 1987. The WETP program is recognized as the leading HAZWOPER training provider in the nation.

- As of September 21, 2005, EPA and the U.S. Coast Guard have responded to over 400 reported incidents (oil spills and/or other hazardous releases). Of these, there were five major oil spills in the New Orleans area resulting in releases of over 8 million gallons.⁴
- At least one Superfund site completely submerged in the New Orleans floodwaters, as did many other sites with hazardous materials on site.⁵ There are twenty-four Superfund sites located in the region affected by Hurricane Katrina.
- EPA found total coliform or *E. coli* levels in the floodwaters up to 75 times the level the agency considers safe for human contact.

OSHA, in its Health and Safety Plan (HASP) clearly recognized the importance of HAZWOPER training with the following language:

The cleanup of hazardous materials releases will be handled by properly trained and protected individuals in accordance with the requirements of 29 CFR 1910.120.

With the vast amount of contamination in the area, it is critical to see the training of cleanup workers as a long-term commitment to delivering a range of effective training that is tailored, as much as possible to the specific worker populations and the hazards they face. In order to do that, it is necessary to identify who is/will be working in the Gulf Coast, to what hazards these populations are likely being exposed and what training should be provided in order to properly protect these workers from those identified hazards.

Five distinct populations have been identified:

- Federal employees and federally-supported contractors
- State and Local government workers
- Traditional construction workers
- Other contractors
- Residents/Home owners

While these populations are distinct, the work they will do and the hazards to which they will be exposed are not distinct. Therefore, the types of training to be provided, for the most part, will not vary greatly by target group so long as they are participating in the recovery and cleanup effort.

The following characterizes the type of work that is, or will be taking place in the Gulf Coast states:

- Debris removal and demolition work
- Building inspections, quality control audits and monitoring
- Workers exposed to traffic during their duties
- Roofing repair
- Mold remediation
- Cleanup operations
- Ship removal operations
- Environmental response work
- Power restoration
- Communication restoration
- Tree trimming
- Blue tarping
- Crane operations
- Dewatering
- Repair of highways/roads/bridges, overpasses and tressels
- Diving
- Railroad restoration
- Water/sewer distribution treatment
- Building/residential construction
- Maritime/port/dock repair

The types of training that will be required include, but may not be limited to:

- Hazard awareness
- Using personal protective equipment, including respiratory protection
- Hazardous waste operations and emergency response
- Mold remediation
- Medical surveillance, including recognizing signs and symptoms of exposure
- Stress management
- Incident management/unified command systems (National Incident Management System-Incident Command Structure)
- Site-specific hazards
- Inhalation of dust containing asbestos, silica and other toxins
- Chemical exposures
- First Aid, CPR, and AED (Automatic External Defibrillator)
- Workzone safety
- Chainsaw
- Chippers
- Confined spaces
- Fall protection
- Trenching/excavation
- Debris site hazards
- Building and structural hazards
- Demolition safety
- Material handling (forklifts, cranes, bobcats, loaders, etc.)
- Electrical
- Ergonomics
- Heat/cold stress
- Severe weather
- Asbestos awareness
- Lead awareness
- Silica awareness
- Chemical hazard communication
- Decontamination
- OSHA 10 and 30 for General Industry and Construction
- Radiation
- Bloodborne pathogens
- Lock out/Tag out
- Process safety management

Properly protecting workers in the Gulf Coast region will require a combination of training recourses to be used: awareness level training, OSHA HAZWOPER standard-related training and HAZWOPER training. Each of these is described in detail in the

accompanying NIEHS Hurricane Katrina Response Worker Safety and Health Training Overview.

Federal Employees and Federally-Supported Contractors:

The Army Corps of Engineers, FEMA and the Department of Defense (cleaning up military bases) have all let major contracts to deal with the aftermath of hurricane Katrina. In addition FEMA employees and Army Corps of Engineers employees, as well as other federal agency employees are working at the Joint Field Offices (JFO) and may require training. At least some of the federal contracts being let require daily tailgate safety meetings each morning. The purpose of the meetings is to review the anticipated hazards of the day and mitigation measures for each hazard. These safety meetings should in no way be the only safety and health information these workers receive. NIEHS awardees given supplemental training awards under Notice Number NOT-ES-06-005 will be training this population.

To date, the following types of training have been delivered to federal employees and federally-supported contractors:

- General Awareness orientation
- Building inspectors receiving PA safety training (Public Assistance (PA), Health and Research inspector's Safety Orientation)
- CPR/AED (Automatic External Defibrillator)
- Katrina Disaster Site Worker Course, modified as needed
- Louisiana State Department of Health – Train-the-Trainer awareness training
- Flagger/Work Zone training
- Defensive Driving
- QA Safety (Inspector Awareness training)

State and Local Government Workers

State, local and municipal government workers in each of the affected states are working hard to clean up and repair infrastructure. States' Departments of Transportation, Health Services, Public Works and Public Safety are working either directly or through contractors to provide needed services. As such, the Louisiana Transportation Department has requested that its workers be provided with 8-hour Hazard Awareness training (Baton Rouge, Hammond, and Bridge City). In addition, teachers in some districts are being required to clean up schools. Teachers in this situation need hazard awareness training and also more extensive training on mold remediation. Louisiana Office of Public Health has requested safety and health training for its workers. NIEHS awardees of the Hazardous Waste Worker Training Program may train this population using their current training awards.

“Traditional” Construction Workers

In addition to the workers hired by federal contractors, construction workers may be hired by residents and/or private companies for demolition, debris removal, mold operations, cleanup operations and reconstruction. These workers will require the same types of training being provided to the federal workers and federal contractors who are doing the

same work and facing the same hazards. NIEHS awardees of the Hazardous Waste Worker Training Program, the Brownfields Program and the Minority Worker Training Program may train this population using their current training awards.

To date, the following types of training have been provided to construction workers:

- Hazardous Waste
- Asbestos
- Microbial
- OSHA 10
- OSHA 30
- Concrete placement

Other Contractors

This group includes day laborers, random workers not trained in construction looking to profit from the hurricane, and immigrant workers. Immigrant workers are likely to have a limited understanding of English (many speak Spanish and Vietnamese). In addition to not speaking English, these workers may have low literacy in their native language. Training should be primarily visual and hands-on, rather than word intensive. This population is also likely to be less willing to take the time for training because they are concerned they may not get to do the work if they take the time to be trained. However, training is critical for this population, which is typically asked (and often willing) to do some of the most hazardous work. They will face many of the same hazards as the other groups of workers. There have been many reports of immigrant workers being mistreated - in some cases they have not been paid what they were promised, not paid at all and/or not given any training to prepare them to perform their work safely. NIEHS awardees of the Hazardous Waste Worker Training Program, the Brownfields Program and the Minority Worker Training Program may train this population using their current training awards.

To date, the following types of training have been provided for this population:

- Mold abatement
- Lead abatement
- Asbestos abatement
- Construction
- Hazardous materials

Displaced Residents

Displaced residents are people who have lost their homes and/or jobs as the result of the hurricanes. The primary concern of most displaced residents is economic survival, not environmental safety or protection. However, as they attempt to return to their communities it is imperative that they have proper training to protect themselves as they try to salvage their keepsakes and their personal economic positions. There is a need to increase the number of trained environmental response and construction workers in the area and displaced residents who are grappling with their economic stability should be a priority among those provided training and given jobs. The Brownfields & MWTP solicitation (NOT-ES-06-004) is strictly designed to provide training to this population.

To date, the following types of training have been provided to displaced residents:

- Mold abatement
- Lead abatement
- Asbestos abatement
- Construction
- Hazardous materials

Conclusion

With the extent and level of contamination still largely unknown, workers must be provided with HAZWOPER training. This is the only type of training that will address the reasonable possibility of exposure to chemicals or biological agents during their work.

In addition to hazardous materials training, workers face a host of other general construction-related hazards and as such, should be provided with hazard-specific training.

While there continues to be a need for some just-in-time awareness training, for the most part the initial response and recovery has been completed and it is time to focus more attention and time on comprehensive worker safety and health training.

¹ Testimony of Robert R.M. Verick, Gauthier-St. Martin Eminent Scholar Chair in Environmental Law Loyola University of New Orleans, before the Subcommittee on Environment and Hazardous Materials of the Committee on Energy and Commerce, U.S. House of Representatives, September 29, 2005.

² "Extreme cleanup on tap in New Orleans," *The Dallas Morning News*, November 6, 2005.

³ Attachment to statement of Henry Falk, M.D., M.P.H., Director, Coordinating Center for Environmental Health and Injury Prevention, DCD/Agency for Toxic Substances and Disease registry, before the House Energy and Commerce Subcommittee on Environmental and Hazardous Materials.

⁴ Written statement by Deputy Administrator Peacock before the Sub-committee on Environment and hazardous Materials, Committee on Energy and commerce, September 29, 2005.

⁵ National Resources Defense Council, September 2005 report on Katrina.