

The Role of Asbestos Training in Katrina Demolition Operations

By Dan Snyder

National Institute of Environmental Health Sciences (NIEHS) recently awarded medallions to ASSE Industrial Hygiene Practice Specialty (IHPS) member Dan Snyder and his team for their work during recovery and cleanup operations following hurricanes Katrina and Rita in Mississippi and Louisiana. The awards ceremony took place during the NIEHS annual Fall Awards Meeting. During breakout sessions at the technical workshops, Snyder led discussions on his experiences with disaster site worker training program development. One major component of the training mission is asbestos safety training.

OSHA's Worker Safety and Health Support Annex to the National Response Plan identified Katrina-response training needs. The annex provides guidelines for implementing worker safety and health support functions during potential or actual Incidents of National Significance. The annex also describes the actions needed to ensure that threats to responder safety and health are anticipated, recognized, evaluated and controlled consistently so that responders are properly protected during incident management operations.

NIEHS, specifically the Worker Education and Training Program (WETP), is cited as a cooperating agency in the annex and as an assistance program for the training and education of workers engaged in activities related to hazardous waste removal, containment and emergency response. The program provides:

- training technical assistance such as instructional staff, curriculum development experts, subject matter experts and professional staff;
- safety training to worker target populations with respect to the nature and location of the incident and the particular hazards;
- assistance and support in the development and delivery of site-specific health and safety training through appropriately qualified WETP awardees instructional staff;

- assistance such as respirator fit-testing and distribution of PPE.

NIEHS awarded funding to the Hazardous Materials Training and Research Institute (HMTRI) for deploying a Katrina-Response training team under the Safety and Health Training Annex of the federal National Response Plan to customize and deliver disaster site worker safety training to all federally deployed and contracted workers. HMTRI contracted with Snyder's handpicked team of professionals who, over a 10-month period, delivered more than 700 hours of instruction to more than 12,000 federal Katrina-Rita response workers. Much of this focused on asbestos worker and supervisor training efforts in Mississippi and Louisiana.

Katrina response and recovery operations are long-term projects. When rescue activities were concluded in early September 2005, a much longer period of sustained recovery operations began. The Federal Emergency Management Agency (FEMA) assigned the U.S. Army Corps of Engineers (USACE) the mission of removing debris and structural demolition from public rights-of-way and private property in areas designated by county or city governments. Estimates range as high as 100 million cubic yards of debris to be removed from Mississippi and Louisiana. USACE worked with private contractors to remove debris from public rights-of-way and to demolish structures released by FEMA through a right of entry process.

Prime contractors for USACE are required to conduct safety training and to supervise worker safety, much of which the HMTRI team provided. OSHA, initially not in a compliance-enforcement mode, served as a technical resource along with EPA, USACE and the HMTRI team. It intervened with workers and supervisors through safety briefings, training and on-



site observations/feedback techniques. OSHA determined that demolition operations fall under Class II asbestos work under the 29 CFR 1926.1101, and EPA considers the operations as subject under the Asbestos Hazard Emergency Response Act. OSHA conducted more than 6,000 asbestos samples with very few positive asbestos hits. The sampling results are published on the OSHA website.

A major component of the training involved monitoring techniques to determine a "negative exposure assessment" as defined in the OSHA standard. Contractors are responsible for determining exposure, and many retained a competent person able to conduct asbestos monitoring and to oversee the asbestos demolition operations.

With tens of thousands of structures identified for demolition, the scope of work is daunting. One dominant safety and health hazard identified is asbestos exposure from the many construction materials involved. Additionally, many of these structures are older with large amounts of asbestos products in the roofing and siding materials. Methods for evaluating and controlling worker and community asbestos exposure were identified in interagency safety committee meetings, then conveyed to federal workers and demolition contractors through training efforts.

In summary, asbestos demolition operations at the disaster site involve a delineated "hot zone," which is identified through signs and marking tape, equipment such as

backhoes, bobcats, skid steers and debris trucks or trailers, and a water truck to eliminate any dust or asbestos fibers released during demolition activities. The goal of the asbestos training programs is to educate workers on the health hazards and control methods associated with asbestos-containing materials (ACM), potentially asbestos-containing materials (PACM) and regulated asbestos materials (RAM). Such acronyms, along with the various regulatory requirements, posed a challenge for trainers to define adequately for the workers. Engineering, administrative and PPE measures can effectively control the health hazards of asbestos.

The HMTRI training team adopted the systematic approach to training (SAT) as the model for training government assets and prime contractors, and for developing instruction that meets the training needs of disaster site workers. SAT is a comprehensive and flexible system designed to:

- identify behaviors performed on the job;
- select those critical behaviors for which instruction is necessary;
- develop and conduct the best objective-based instruction to teach those behaviors in terms of effectiveness, efficiency and economy;
- evaluate not only worker performance of the objectives, but also the ability of the curriculum to meet the stated objectives;
- revise content that fails to meet those objectives.

The goal of asbestos safety training and education is to develop effective and efficient instruction that promotes transfer of learning from the instructional setting to safety performance on the job. Much of this training was conducted in the field, and the amount of training varied with an individual's job description and the federal and state asbestos regulations. Workers operating outside the hot zone received 2 to 8 hours of awareness training. Workers operating in the hot zone receive 32 hours of EPA or state-accredited asbestos worker training, while supervisors are required to take the 40-hour accredited asbestos course. USACE requires its quality assurance/quality control supervisors to take the 8-hour awareness training, which focuses on jobsite setup (delineation), worker PPE and engineering controls such as the wet method.

One challenge of delivering asbestos training on a disaster site is time. Every-

one is working 16-hour days and getting paid by the cubic yard of debris removed. Often, training is conducted on weekends, on the job or in the evenings to accumulate the required training hours and to accommodate the unique nature of the work environment. It was rewarding to see safety improvements during asbestos demolitions that can be directly linked to the training and education efforts.

Katrina response workers face a multiplicity of adverse hazardous materials and wastes as they respond to debris removal, demolition and site remediation. In addition to specific hazards such as asbestos, traffic safety in many locations has been compromised due to the lack of powered signals, congestion, large debris trucks, and damaged or partially blocked roadways. Training occurred at various locations in the field and in facilities like the FEMA disaster recovery centers, warehouses and logistics centers, primarily located in abandoned stores that survived the storm with little damage. They also delivered training in joint field offices in Jackson and Biloxi, MS; New Orleans and Baton Rouge, LA; and at multiple USACE sites in the field.

Training and education served as an invaluable tool for both federal responders and contractors. Without the Safety and Training Annex to the National Response Plan, it is likely that many workers would not have received safety training, thus increasing their potential for

significant asbestos exposure. The HMTRI training team performed groundbreaking work in the profession during the largest federal disaster response in our nation's history. By incorporating cutting-edge technology and training approaches, these seasoned professionals have had a remarkable impact on worker safety and health during disaster response. ■

Dan Snyder is a managing partner in Performance-Based Safety LLC, a consulting network. He is the team leader for the NIEHS Safety Training team, which is conducting operations in the Gulf Coast region as part of the federal response efforts following the 2005 hurricane season. Snyder is Chair of the ASSE Arkansas Chapter Governmental Affairs Committee and a member of the Conference Planning and Training committees. He also works under a Department of Homeland Security agro-terrorism grant to provide train-the-trainer seminars in Arkansas for responders who may be mobilized in the event of an agricultural disease outbreak for large animals. In addition, he serves as the 2007 President of ACHMM's Greater Ozarks Chapter. Snyder served as a U.S Army military intelligence operative for the 194th Long-Range Surveillance Airborne detachment in the 34th Infantry Division. He has served as an instructor in the Environmental Resource Center at Crowder College and as a former program director for National Safety Council's Ozarks Chapter. Snyder holds B.S. in Science and Biology from the University of Northern Iowa and an M.Ed. in Adult Education and Human Resource Development from the University of Arkansas. He may be reached at (417) 773-3555 or snyder@safetyconsultants.org.

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