

INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS



STATEMENT OF

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BEFORE THE

HOUSE SUBCOMMITTEE ON
RAILROADS, PIPELINES AND HAZARDOUS
MATERIALS

ON

REAUTHORIZATION OF THE DEPARTMENT OF
TRANSPORTATION'S HAZARDOUS MATERIALS
SAFETY PROGRAM

MAY 14, 2009

Thank you Chairwoman Brown, Ranking Member Shuster, and distinguished members of the Subcommittee for the opportunity to testify before you today. My name is Elizabeth Harman and I serve as Director of the Hazardous Materials / WMD Training Department of the International Association of Fire Fighters (IAFF). I am pleased to appear before you today on behalf of IAFF General President Schaitberger and the nearly 300,000 fire fighters and emergency medical personnel who comprise our organization.

IAFF members protect eighty percent of the nation's population and serve as the first line of defense during any hazardous materials incident. It is from this perspective as America's front line hazardous materials responders that we speak today to the important role the Department of Transportation plays in ensuring the safe transportation of hazardous materials and ensuring that communities are able to safely and effectively respond to a hazmat incident should one occur.

Madam Chairwoman, I testify today not only as a representative of the IAFF, but as someone who understands first-hand the importance of this issue. I am a fully certified fire service instructor and have previously administered training programs at Johns Hopkins University, School of Medicine and the University of Maryland, Maryland Fire and Rescue Institute. I have also served as a full-time fire fighter / paramedic for the City of Fairfax Fire and Rescue Department, and know from experience to the practical implications PHMSA's hazardous materials safety program has on local emergency response.

Our nation's transportation systems are burdened with more hazardous materials today than ever before. As the potential for serious hazmat incidents continues to grow, it is more important than ever to ensure that our nation's emergency responders are properly trained and have sufficient information to conduct a safe and effective response. The Department of Transportation, through its Pipeline and Hazardous Materials Safety Administration (PHMSA), and its predecessor agencies, has been an innovative leader in this field and has helped ensure the safe transportation of hazardous materials. In order to build on this record of success, important changes are now needed to increase the effectiveness of current hazmat response training programs and expand and improve hazardous materials identification tools.

The Need for Training

According to the National Fire Protection Association (NFPA), fire departments in the United States receive over 350,000 calls related to hazardous materials emergency response each year. As the number of hazardous materials incidents has increased, so too has the complexity and dangerous nature of responding to such incidents multiplied. This is especially true as it relates to our nation's transportation systems. Hazardous materials of nearly every class are to be found on our nation's roads and rails, skies and seas. These materials may react violently to air or water, cause serious injury to individuals when inhaled or upon skin exposure, and may pose new hazards when exposed to other materials. While their transportation is generally safe and uneventful, an accident or

incident involving hazardous material can easily place the general public, as well as the individuals who respond to such incidents, at risk.

When an incident involving the transportation of hazardous materials does occur, the individuals tasked with responding to and containing the incident are, almost without fail, fire fighters. Unfortunately, despite the potential for a hazmat incident in every community in America, far too many fire fighters are insufficiently trained to ensure a safe and effective response. In its Second Needs Assessment of the U.S. Fire Service, NFPA estimates that thirty-eight percent of fire fighters whose duties involve hazmat response lack formal training of any kind. Furthermore, only twenty-nine percent of fire departments report all personnel to be trained in even the basics of hazmat response.

While it is clear from such figures that training is needed for new recruits and personnel who have yet to undergo training, it is also worth noting the hazardous materials response training is not a one-time event. It is essential that all first responders undergo refresher training to ensure continued proficiency. The Occupational Safety and Health Administration's Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) requires emergency responders to receive annual refresher training "of sufficient content and duration to maintain their competencies." In addition to providing responders an opportunity to maintain their skills, refresher training is vital to familiarize responders with new technology which may be used or encountered during a response.

Unfortunately, the lack of adequately trained personnel in the fire service can have serious real-world implications including property loss, death and injury to both private citizens and responding fire fighters.

In addition to the threat inadequate training poses to lives and property, an improper response can also have serious economic implications. On March 21st, a tractor-trailer overturned on Route 33 near Wind Gap, Pennsylvania. The first responders, fearing the trailer contained a corrosive gas, shut down the highway and evacuated five-thousand people. While there are many hazardous materials incidents where erring in the favor of the public safety is the wise choice, this accident was not one of those. Fire fighters learn to recognize the differently shaped containers that transport different materials. The accident in Pennsylvania involved a liquid tank truck which contained a corrosive liquid, not a corrosive gas. Had the first responders been trained to recognize the difference, the number of individuals needing to be evacuated would have been greatly reduced.

Given the threat to individuals' personal safety and economic well-being, it is incumbent that we ensure fire fighters nationwide receive hazardous materials training to provide a safe and effective response.

IAFF Training Programs

Under PHMSA's Hazardous Materials Emergency Preparedness (HMEP) grants program, the IAFF has received an annual grant to train instructors to deliver hazardous materials training to emergency responders nationwide, in the largest metropolitan areas

to remote rural communities. The IAFF takes its mandate to train first responders extremely seriously, employing a full-time, dedicated staff to administer our training programs. We provide training to any responder whose duties potentially include hazmat response, including both professional and volunteer fire fighters, free of charge. This grant has enabled the IAFF to significantly increase training rates in the first responder community, training approximately 2,698 instructors who have gone on to provide training to an additional 59,000 emergency responders. The IAFF's unique training model avails responders with real-world training in hazardous materials response that few institutions can match, delivered by instructors who are both certified fire instructors and certified hazmat responders. Furthermore, because the instructors trained through the IAFF's HMEP program deliver training directly to responders in their own communities, instructors are able to tailor their presentations to address the unique concerns and challenges to a particular community, such as a chemical plant or specific hazardous materials shipping route.

Independent evaluations of IAFF training have found its training programs to be cost-effective, providing significant hands-on training for a low cost per contact hour. Evaluations have also found instruction to be highly effective, with students reporting high post-course confidence and achieving high post-quiz scores.

For example, I recently received a letter from a student who reported that as a direct result of our training, he has significantly changed his response to a hazardous materials call:

I was personally faced with a call after the class which made me realize what I had possibly missed for years. It was a simple smoke condition at our local high school. A science experiment had complications and filled a wing with light smoke. In the past I would have conducted ventilation and allowed the students back in when it cleared. This is the first time that I considered using a gas detector inside; this revealed that there were high levels of [carbon monoxide] which lasted one and a half hours after I would have normally allowed the students back in. I realize I possibly averted exposing these students to a hazard I never would have considered.... [I] now realize that I was [previously] actually jeopardizing the safety of the people that rely on my service and with the training I received, I feel confident that I can keep my crew safe and protect the community.

Increasing Effectiveness of Current Training Programs

Despite the demonstrable results our training achieves, our effectiveness is restricted due to limited funding and statutory restrictions on eligible HMEP training activities. Training requests regularly exceed our resources. It is from this perspective that we are concerned that the Administration has chosen to cancel its proposed increase to hazardous materials transportation fees. While we understand that the Administration projects funds to be sufficient to fully fund all grants through the end of the Fiscal Year, it also acknowledges that the current amounts of the registration fees are not sufficient to fully fund HMEP grants in the future. The IAFF strongly supported the Department of

Transportation's original proposal to increase fees, as it allowed for the IAFF to train numerous additional trainers, resulting in an exponential increase in trained responders. We hope the Administration will revisit this issue in the near future to address the serious hazmat training needs in the first responder community.

Unfortunately, even with the increased funds generated by a fee increase, the \$28 million provided through the Department's HMEP grant program is insufficient to meet the hazmat training needs of America's fire fighters. As mentioned previously, thirty-eight percent of fire fighters responsible for hazardous materials response lack formal hazmat training of any kind. The training needs of these individuals, combined with the equally-urgent needs of new recruits and refresher training needs of veteran responders, are currently growing due to the current economy. Unfortunately, in making tough budgetary decisions, many local communities facing reduced revenues are choosing to cut funds for training. Increased funding under the HMEP grant program would help the states and organizations such as the IAFF increase the number of students trained to overcome the current knowledge gap, as well as help fill the unmet needs of local fire departments hit hard by the recession.

Additionally, under current law, we are currently limited to training instructors to deliver hazmat response training programs in their own communities. While this model can, and has proven to be, effective, it has inherent limitations. Most notably, a trainer's effectiveness depends on the support he or she receives in his or her own community. If a local fire department fails to invest the necessary time or resources, such as backfilling positions so that responders are able to receive training, or is unable to do so due to budgetary limitations, the trainer's skills and knowledge, in which scarce federal resources have been invested, will go wasted.

Working within these limitations, the IAFF is committed to improving its training programs to maximize their effectiveness. Over the past year, the IAFF has added supervised training sessions to support local instructors once they have received training from the IAFF. These sessions were designed to ensure the competency of the local instructors, as well as the transfer of knowledge to the students through their teaching. The IAFF is also in the process of developing an evaluation program to determine the real-world impact of HMEP-funded training on the end user.

Even with these improvements, the efficacy of current training programs would be markedly improved through the authorization of additional training activities under the law. Specifically, training activities should be expanded to include proven effective methods such as direct student training and distance learning. Allowing for such activities will help overcome the inherent limitation of the train-the-trainer model. Additionally, eligible activities should be expanded to include funding for a department's backfill needs. By providing funds to fill positions while responders are at training, we can help ensure that the weak economy does not unnecessarily interfere with the public safety.

Providing Appropriate Training

In addition to providing sufficient funds to train a greater number of first responders, the Department of Transportation has a duty to ensure that emergency responders receive the appropriate level of training. OSHA regulations identify several different training levels for workers who may be required to respond to hazmat incidents as part of their duties. In providing five different levels of hazardous materials emergency response training, OSHA appropriately recognized that individuals should be trained at different levels, depending on the duties and functions each worker is expected to perform.

Unfortunately, the level of training that is currently provided to emergency response personnel in many states and localities is at the “awareness” level. Awareness training is intended for employees at facilities where hazardous substances are present, and is intended to train such employees to recognize potential releases of a hazardous substance and “initiate a response sequence by contacting the appropriate authorities,” which in most cases would be the local fire department. While this level of training would be appropriately provided to, for example, a rail worker, this level of training is wholly inadequate to prepare the first responders to a hazmat call.

The minimum level of training needed by first responders is “operations” level. Operations level training is specifically designed for the initial emergency response which occurs within minutes of the incident being reported. These emergency responders stabilize the situation and prepare the emergency scene for the hazmat specialists who will undertake direct mitigation. The mission of responders who are trained at the operations level is to “protect nearby persons, property, and the environment from the effects of the release.” They are trained to contain the release from a safe distance, keep it from spreading and prevent exposures.

OSHA identifies three additional levels of hazardous materials training for those specialist hazmat responder who are called after the initial responders have secured the area. Hazardous Materials Technician, Hazardous Materials Specialist, and On-scene Incident Commander require increasingly specialized training and increasingly advanced competencies. While these are also appropriate levels of training for certain fire fighters to receive, operations level training should be the very minimum level of competency required of a fire fighter.

In its aforementioned Second Needs Assessment, NFPA reports that only one-fifth of fire departments have all personnel certified to the operations level. Any response to an incident involving hazardous materials carried out by inadequately trained personnel presents a danger to the public as well as the responders themselves. To better protect the public safety, Congress should ensure that all training delivered through the HMEP grant program should be at the operations level or greater.

Improving Hazardous Materials Identification Tools

In addition to bolstering their emergency responder training programs, the Department of Transportation has an important role to play in making it easier for responders to identify

hazardous materials. Accurate, timely information is key to any successful emergency response, and it is especially important on a hazmat call. Without the ability to quickly and accurately identify hazardous cargo and numerous crucial details about such cargo, fire fighters may lack the information necessary for a safe and proper response.

Fire fighters currently rely on two simple but effective tools to identify hazardous materials during transportation: placards and shipping papers. These simple tools have generally proven successful in their ability to relay information to first responders because they are highly recognizable and easy to understand, two important criteria in the high-stress and chaotic scene of a hazardous materials incident. Despite their life-saving importance, placards and shipping papers also have serious limitations – they may be damaged, hidden or unreachable during an incident. A fire enveloping a tractor-trailer, for instance, may destroy physical shipping papers, and the smoke from a fire may obscure a placard from sight. And, although the information they provide is crucial, it is limited in its scope.

New technologies can help first responders better identify hazardous materials and better inform such individuals on how best to respond to an emergency involving such materials. Congress has repeatedly sought to improve emergency responder identification systems over the past two decades. In 1990, Congress directed the Department of Transportation to undertake a rulemaking to improve identification systems and funded a National Academy of Sciences study on the subject. In 1994, Congress directed the Department to fund pilot projects testing certain identification technologies. Despite these efforts, there have not been any significant improvements in hazardous cargo identification systems in more than thirty years.

One promising technological initiative is the establishment of an electronic freight management program. Providing access to continuously updated electronic shipping information will help emergency responders identify hazardous substances during a hazmat incident without putting personnel at risk. An electronic system also has the potential to enhance a department's response by providing details shipping papers might lack, such as comprehensive first aid information. While such a system can provide many advantages to a responder, it also has significant limitations. The mobile electronic equipment necessary to receive such information at the scene of an incident may be prohibitively expensive for many fire departments. Additionally, spotty wireless reception may preclude many departments from receiving information at the scene of an incident, especially for incidents that occur in rural areas. Despite these limitations, electronic freight management can provide another important tool in the fire fighter's arsenal when responding to a hazmat incident.

We are also supportive of the Department's proposal to establish a commodity flow tracking system. Tracking and mapping commodity movements throughout the United States will provide responders with a more complete picture of threats facing particular communities, allowing state and local governments the opportunity to better protect their communities and plan for potential emergencies. For example, as a first responder, knowing that ammonia is regularly shipped through my community will allow my

department to ensure that its personnel are fully trained in how to respond to an ammonia release, how to treat injuries due to ammonia inhalation, and how to best protect the community and themselves in such a scenario. Such information will also help local departments pre-plan evacuation scenarios, stockpile needed equipment, and conduct exercises to ensure their responders are practiced in incidents involving ammonia.

It is also important to ensure that incident commanders have ready access to e-shipping and commodity flow data. In the chaos of a hazmat incident, responders do not have the luxury of time. Whatever systems are developed must guarantee that incident commanders can access information on-demand, twenty-four hours a day, and that such information be accurate and up-to-date.

Although new technologies have the potential to aid hazmat responders, current identification tools such as CHEMTREC have also transformed the way responders attack a hazmat incident. A 24-hour public service hotline, CHEMTREC serves emergency responders by helping them obtain information and assistance for incidents involving chemicals and hazardous materials. A vital lifeline for responders, CHEMTREC serves as a model for any hazmat information service. Such hotlines, however, are of little use to responders if they are unavailable at the time of an incident or provide less than the necessary information. Therefore, the Department may wish to consider setting standards for such services. Any hotline like CHEMTREC would need to provide 24-hour access to a live operator. Information provided must include response guidelines and the ability to immediately connect a responder to a material's manufacturer, as well as to incident commanders who have previously managed similar hazardous materials incidents. Finally, should the Department choose to set such standards, we would respectfully request that it consult closely with the end-users that will actually be using the system on an everyday basis to ensure it meets their needs and expectations.

Even with the aid of these powerful tools, placards and physical shipping papers will remain vital tools for fire fighters on the scene of a hazardous materials incident. These simple tools will continue to play an important role in ensuring responders can quickly and accurately identify a hazardous material for the foreseeable future. In the world of hazardous materials incidents, redundancy and simplicity of information is not simply convenient, it can be life-saving. It is therefore absolutely crucial that new identification tools must supplement, rather than replace, current requirements for placarding and physical shipping papers.

Information Sharing

Before concluding my testimony, I'd like to touch upon one additional point and address the ongoing implementation of the National Hazardous Materials Fusion Center. Such a center, tasked with the collection and analysis of data relating to hazardous materials incidents, has been long-overdue. Too often, lessons from past hazmat incidents are not shared with the fire service at large. By sharing key information gleaned from past

responses, the fusion center has the ability to transform the fire service's response to hazmat incidents.

While we believe that such an endeavor is critically necessary, its continued success will depend in large part on its continued implementation. The center must ensure that the information gathered is turned into useful information, including planning tools, best practices, prevention strategies, and training programs. The center must also ensure that such information is funneled to local fire departments so that they may take advantage of its important work. Finally, the center must involve rank and file responders in its development and day-to-day functioning to ensure that the end-user's perspective is considered.

Conclusion

This concludes my testimony. On behalf of the International Association of Fire Fighters, I appreciate the opportunity to share with you our views on how to best improve our nation's hazardous materials response capabilities. By committing additional resources for emergency responder training and the enhancement of hazmat identification tools, we better ensure the safety of communities and their citizens nationwide and continue to guarantee that our nation's transportation network remains a safe and efficient mode for private travel and public commerce. To the extent that the IAFF can assist the Subcommittee in achieving this vision, I am happy to offer our expertise and pledge to work closely with you and your staffs.

Again, I'd like to thank the Subcommittee for the opportunity to testify today and am happy to answer any questions you may have.