

APRIL 3-4, 2006 • RESTON, VIRGINIA

2006

HAZARDOUS  
MATERIALS

Team Leaders Roundtable



FINAL REPORT



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## Final Report

*Sponsored by the International Association of Fire Chiefs Hazardous Materials Committee  
in cooperation with the U.S. Fire Administration*

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*The U.S. Fire Administration supports the Hazardous Materials Team Leaders Roundtable through a cooperative agreement with the International Association of Fire Chiefs on fire service hazardous materials preparedness and response. The positions developed by the Roundtable, however, do not necessarily reflect the views of the U.S. Fire Administration.*

# 2006 HAZARDOUS MATERIALS Team Leaders Roundtable

Hazardous materials mitigation and control have come to the forefront in public safety planning since September 11, 2001. The need for national standards and practices, and proactive response, has never been stronger. On April 3-4, 2006, the International Association of Fire Chiefs' (IAFC) Hazardous Materials Committee convened a Hazardous Materials Team Leaders Roundtable with 40 of the nation's leading authorities on hazardous materials response to review the current state of the hazardous materials response community and recommend future strategies.

The following report establishes the direction for action and discussion by the hazardous materials community. Working together under common goals, public safety will help deter catastrophic events and human loss.

## **1. CONSEQUENCE PLANNING, MANAGEMENT AND RESPONSE**

The 2006 Hazardous Materials Team Leaders Roundtable participants recognize that the current response to hazardous materials incidents affords the opportunity for improvement and urges the Department of Homeland Security (DHS) to continue support for enhancement at all levels. The Roundtable participants recommend the development of a national strategy for consequence planning, management, mitigation and response to the many hazards that face America today. As a path forward for meeting the multi-faceted challenges of an all hazards approach, clear-cut lines of authority and responsibility must be established well in advance of an event. To ensure the highest standard of community protection nationally, the participants recommend that a national fire and rescue services hazardous materials doctrine be established and implemented. The Roundtable participants recommend that the doctrine include, but not be limited to:

1. Because of their historical role and pre-existing expertise and capability, the fire service shall have the lead responsibility for response to incidents of local and regional significance involving natural, accidental and intentional hazards (fire, hazardous materials, CBRN, etc.).
2. Local, state, and federal government programs shall be responsible for providing adequate resources and support for staffing, training and equipping of local fire and rescue services departments to fulfill this lead role.
3. The fire service shall have significant input in local and regional emergency hazard assessment, response planning, mitigation and emergency preparedness.
4. The fire service shall have significant input in local hazard (fire and hazardous materials) risk reduction and incident prevention/mitigation.

The Roundtable participants encourage the IAFC or the United States Fire Administration (USFA) to host a fire service organization meeting with the goal of developing this hazardous materials doctrine.

Local responders understand that the response to natural and man-made hazardous materials events and the respective training form the basis for a safe response to a weapons of mass destruction (WMD) event. The Roundtable participants recommend that DHS publicly recognize an “All Hazard” approach to planning and preparedness and appropriately support those activities. Currently DHS, to a large extent, has been primarily focused on areas of prevention. Even with aggressive prevention programs, history has shown that events still occur. While prevention measures such as intervention and interdiction should continue as Law Enforcement responsibilities, consequence management and response should be delegated to the fire service and must be simultaneously supported, developed and strongly encouraged.

The Roundtable participants further recommend that all emergency response organizations recognize and accept that to respond safely to any incident where hazardous materials/WMD are involved, they must train their personnel to the Core Competencies for Operations Level Responders of National Fire Protection Association (NFPA) Standard 472, at a minimum. Each authority having jurisdiction must complete a risk-based community assessment and train their personnel in all mission specific competencies that apply, based on their response plan. Any level less than the Core Operations level is not safe and they are placing their personnel at risk.

## **2. HAZARDOUS MATERIALS IDENTIFICATION METHODS**

The Hazmat Roundtable participants do not support security proposals to remove placards from rail tank cars and other areas until an improved identification system is not only in place but has demonstrated functionality. While acknowledging the concerns of the security community, the Roundtable participants are not willing to sacrifice placards in the absence of any effective identification system. The participants further believe that some of the disciplines lobbying for the removal of placards do not necessarily understand that hazardous materials response is the foundation for WMD response.

There is no significant field data available to either support or reject the utility of placards in the identification of hazmat incidents. The IAFC requests that the National Transportation Safety Board (NTSB) research and report on this subject and asks NTSB to collect data from every hazmat incident. After a thorough review by the federal government, DHS decided in 2005 not to change or remove the use of the current placarding system. Speaking at the 17<sup>th</sup> Annual National Fire and Emergency Services Dinner held by the Congressional Fire Services Institute on April 7, 2005, Secretary of Homeland Security Michael Chertoff announced that the placards are designed to ensure the safety of citizens and first responders. This decision came after the completion of a comprehensive study that included input from first responders, rail operators and other key stakeholders.

A thorough review of options is needed with strong oversight from the hazardous materials community. The Roundtable participants suggest looking further into emerging technologies (such as bar coding) and systems developed by other disciplines. For example,

the trucking industry has been successful in tracking over-the-road trucks and engaging a master shut-off switch if a truck deviates from its designated route.

Another continuing issue is that railroad crew members are difficult to identify at the incident scene. The participants recommend that they wear uniforms to be easily recognized and that they expedite the sharing of information at the scene.

Appropriate federal agencies must promulgate regulations that require all intermodal transport containers to be placarded, and appropriate commodity information should accompany the shipment (required for all other shipments or similar materials) and be immediately available to emergency responders. This includes containers loaded in the United States as well as those entering the United States for transit from one port to another while using transport systems as a land bridge with no local delivery intended.

The Hazmat Roundtable participants want to acknowledge everyone who worked hard to address this issue.

### **3. HAZARDOUS MATERIALS OPERATIONS AND EFFICIENCY**

The Hazmat Roundtable participants are confident that the national response to hazardous incidents can be enhanced. The group recommends the following:

#### ***a. Mutual Aid Agreements and Regional Response Plans***

Working mutual aid agreements and multi-agency response plans must be implemented throughout the country and include military and federal installation hazmat teams. Mutual aid and regional response planners must be aware of the impact of lockdown limits imposed on military bases during crisis conditions such as the DHS Threat Level--Red. During these periods, military and federal hazmat teams may be limited to base or installation response only. These mutual aid agreements and multi-agency response plans must be exercised routinely to ensure coordination during a major event.

Regions should set up in advance the mutual aid reimbursement processes to cover fire department costs (personnel, equipment). For help developing a system, look at the Federal Emergency Management Agency's (FEMA) national fee scale. California's five-party agreement can be used as a template for reimbursing expenses as well.

The Roundtable participants strongly support the IAFC's Intrastate Mutual Aid System and Mutual Aid System Task Force initiatives to improve mutual aid.

#### ***b. Situational Assessment***

First responders must be able to assess the situation (hazmat, biological, biochemical, radiation, dirty bombs and smallpox, among others) and use proper judgment upon arrival at any incident. If the incident does not seem like one the department can handle with available resources, other agencies should be contacted for assistance. A community risk assessment, done in collaboration with other agencies at the jurisdictional level, can be helpful in increasing situational awareness.

Hazardous materials response has historically been procedure-based. This means that the actions of responders were tightly driven by Standard Operating Procedures or

Standard Operating Guides. Risk-based response is the evolution of procedure-based response. Risk-based decision making is a systematic process by which responders analyze a problem involving a hazmat/WMD incident, assess the hazards, evaluate the risk and determine appropriate response actions based on fact, science and the circumstances of the incident. The risk-based response model looks at the threat, vulnerabilities, consequences and likelihood of occurrence when making a risk-based decision. Another prerequisite for risk-based response is experience. In the absence of experience, procedure-based response provides a prescribed response hierarchy. The Roundtable participants recommend procedure-based response as a base level, yet hazmat/WMD responders should strive for the knowledge, skills and experience necessary to implement a risk-based response. Sharing best practices, such as those found on Lesson Learned Information Sharing ([www.llis.gov](http://www.llis.gov)), will help develop the experience to implement a risk-based response.

The Roundtable participants continue to recommend that a procedure-based response matrix be used to improve first responder hazmat operational level risk assessment. A credible risk assessment remains a crucial first step in this process. Training and field guides enhance this assessment and improve the safety of our personnel.

As technology continues to improve field instrumentation used in response testing, the Roundtable participants recognize the need for trained, experienced responders (i.e., operations level mission specific air monitoring) who can interpret the data being collected.

The Roundtable participants strongly support NFPA standard 472 technician or specialist employee competencies as a minimum standard of training for the interpretation of field data and this information should be used along with current resource typing criteria to standardize responder knowledge and capability.

Fire departments should have an Emergency Response Plan and Standard Operating Procedures or Standard Operating Guides for notification, deployment, mitigation and demobilization. The primary goal, until adequate and properly trained personnel are on scene, is to protect the public and first responders.

***c. Emergency Preparedness and Response***

A single access point at DHS is needed to provide fire service organizations with information and training, and guidance concerning hazardous materials, terrorism and weapons of mass destruction. The point of contact at DHS for this clearinghouse should be the USFA.

***d. Standardized Procedures***

Systems must be in place for reliable and timely on-scene chemical and biological testing capabilities.

Standardized procedures, such as triage, should be implemented. The National Fire Academy can address this in training courses for command and control. State and local contingency and alternative back-up plans are needed to manage large or multiple hazmat incidents that exceed the capabilities of local or state response agencies. The

IAFC recommends that all incident operations use the incident management system and unified incident command system taught at the National Fire Academy.

Use the IAFC's "Model Procedures for Responding to Suspicious Packages in a WMD World."

Require Standardized Equipment Lists (SEL) for federal, state and local implementation and use for hazardous materials, WMD, and chemical/biological and medical mass casualty responses. Units should use the InterAgency Board (IAB) SEL as the threshold template. The SEL can be found at [www.iab.gov](http://www.iab.gov) and [www.rkb.mipt.org](http://www.rkb.mipt.org).

**e. *Funding***

DHS funding allocation is risk-based. If a risk assessment/threat analysis cites resources that are not approved for normal funding under grant rules, the resources may be funded based on inferences from the threat analysis. There should be additional resources in any of the following areas: Local/Regional/State Hazmat Teams; Local/Regional/State/Federal EPA; Local/Regional/State/Federal Bomb Squads; and Local/Regional/State Public Health Officials.

**f. *Education Programs***

Critical Incident Stress Management program services should continue to be available for emergency responders.

State, local and national public education and outreach programs on hazardous materials (e.g., the mass casualty decontamination process), terrorism, weapons of mass destruction and risk reduction should be implemented and parallel fire safety education programs. Programs such as the *Household Hazardous Materials: A Guide for Citizens* ([www.usfa.fema.gov](http://www.usfa.fema.gov)) should be created.

#### **4. HAZARDOUS MATERIALS TRAINING**

The Roundtable participants continue to articulate their support for NFPA 472 and the standards development process and encourage the federal government to employ non-traditional delivery methods to enhance the training and education opportunities for stakeholders.

The participants also recommend that:

- a. The Grants and Training office within DHS continue the standardization of training programs.
- b. Additional federal financial support (e.g., Grants and Training office funds) for foundational hazmat training be provided.
- c. Fire departments take full advantage of the Operations Security (OPSEC) for Public Safety Agencies curriculum that is offered at the Federal Law Enforcement Training Center (FLETC) in Glynco, GA, as well as other certified training programs. In addition, fire departments should incorporate OPSEC into their daily operations and procedures.
- d. Federal agencies and stakeholders collaborate on joint training programs.
- e. Training be provided at certified state facilities using qualified instructors.

## **5. SECURE INFORMATION**

There are two distinctive issues to address regarding secure information: individuals within organizations who are qualified to handle law enforcement information, and the sharing of sensitive information outside the law enforcement community. While counterterrorism is a multifunctional issue, not strictly a law enforcement issue, the group identified inherent conflicts between the fire service and law enforcement when handling sensitive information. The problem on the national scale may lie within national security agencies (e.g., CIA, FBI, Secret Service, etc.). Thus, the response community must keep promoting a trusted agency approach.

As compared to last year's assessment, 1) security is improving, 2) the improvements are attributed to individuals more than to policy changes and 3) the need to know overwhelms the need to share.

## **6. UNIVERSAL TASK LIST / TARGET CAPABILITIES LIST**

The Roundtable participants concur with the eight national priorities that are a part of the National Preparedness Goal and the development and implementation of the Target Capabilities List (TCL); however, they have some concerns about the ongoing development process of the TCL and associated assessment and evaluation tools. The participants encourage capability building based on community risk assessment.

## **EMERGING ISSUES**

The hazardous materials community must work to manage the change process which focuses on emergency response at the policy level, not only with respect to alternative fuels, but also for any major regulatory changes that have health and safety impacts.

To that end, the hazardous materials community must continually examine events for new trends and issues and be ready to address them. The following emerging issues should be monitored:

### **1. CONTINGENCY PLANNING**

The Roundtable participants support a review of national response capabilities for hazmat and WMD similar to that used by the FEMA Urban Search and Rescue program for tactical rescue. One method would be to incorporate this review into the National Academy of Science initiatives.

### **2. RESPONSE PARTNERS**

- a. As alternative fuel sources are examined, their impact on emergency response (e.g., hydrogen, liquefied natural gas) must be assessed.
- b. The needs of communities with respect to training and education must be identified.

### **3. FEDERAL INTERACTION**

- a. Stakeholders within the hazmat and terrorism response communities must be educated to navigate through the federal bureaucracy. The USFA should be the

single point-of-contact for all hazardous materials and terrorism resources for first responders.

- b. As the IAFC has been one of the primary stakeholders in providing homeland security and protection since 1873, it should continue to deepen its involvement in all phases of the planning and operations of DHS.

#### **4. FUNDING**

- a. DHS funding for the Assistance to Firefighters Grant (AFG) grant program must be restored. Other agency funding must reach the intended recipients (those who must mitigate and control the immediate chaos) and not be siphoned into organizational bureaucracy.
- b. The fire service must maintain and enhance relationships with federal partners to increase funding and assist the government with appropriate distribution of funds.

#### **5. PUBLIC RELATIONS/EDUCATION**

The fire service must consider any unforeseen and sometimes unrealistic public expectations for dealing with all situations immediately. The public's expectation is that the fire service provides a high level of professional service (i.e., the absence of issues regarding parochialism) including planning activities prior to responses. These expectations may not be realistic. Public outreach must promote realistic expectations based on fire service standards.

In addition, a multi-disciplinary collaborative approach should be taken by the fire service in coordinating outreach and activities with other community agencies.

#### **6. TECHNOLOGY**

High-tech instruments should be utilized by local hazmat teams. Coordinated and integrated education is needed, including basic detection strategies and protocol for step-by-step applications. Consider computer-based training. Develop alternative funding for maintenance and sustainability of equipment.

The Roundtable participants recommend continued support of technology transfer from the Department of Defense to the first responder community. They also recommend continuation of the evaluation of hand-held assays and other detection devices, and support the IAB in that effort.

#### **7. PROCEDURES**

- a. Despite continued improvement in communications between federal agencies and stakeholders, significant opportunities remain to enhance these two-way relationships.
- b. Changes in products and fuels must be identified at the earliest possible stage to educate first responders.
- c. Pesticides must be placarded while the materials are land bridged in the United States.
- d. As illegal, clandestine drug labs have become a significant problem for the entire country, programs should be developed to disseminate information to first responders. Drug labs are set-up in various and migrating locations, leaving first responders responsible for increased decontamination duties. Information to

share includes the program developed by FEMA and a study done by the University of Missouri and Missouri State Fire Marshal's office.

## **8. RESEARCH**

Cooperative research programs with federal partners are needed to ensure appropriate response and community protection.

## **9. TRAINING**

As new threats emerge, mechanisms must be in place to capture required information and aggressively train and rapidly educate first responders.

## **ENDORSEMENTS**

The Roundtable participants support the following issues:

1. SCBA cylinder interoperability
2. CBRN certified respiratory protection
3. CBRN certified personal protective equipment (boots, gloves, suits)
4. Unified message on pandemic flu
5. Activities of the IAB to change Hazardous Waste Operations and Emergency Response Standard terminology regarding chemical protective clothing to NFPA performance-based chemical protective clothing terminology
6. A letter from IAFC to OSHA requesting that chemical protective clothing terminology be changed to reflect the NFPA Chemical Protective Clothing standards terminology
7. Fire departments in those communities where nuclear waste shipments pass through should receive a minimum of Hazardous Materials First Responder at the Operations level training that includes an emphasis upon radiation training and the use of basic radiation detection equipment.
8. IAFC efforts in communications interoperability
9. Activities of the IAB and support of a Standardized Equipment List

## **ROUNDTABLE PARTICIPANTS**

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