



**REPORT
FROM THE**

**HAZARDOUS
MATERIALS
ROUNDTABLE**

by
**The International Association
of Fire Chiefs
Hazardous Materials Committee**

**Supported by
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On July 29 and 30, 2003, the Hazardous Materials Committee (Committee) of the International Association of Fire Chiefs (IAFC) convened a meeting known as the Hazmat Roundtable. The U.S. Fire Administration (USFA) supported the Hazmat Roundtable via a cooperative agreement it has with the IAFC on fire service hazardous materials preparedness and response.

More than 30 of the nation's leading authorities on hazardous materials attended the two-day meeting. The goal was to review the previous roundtable report, discuss the current and emerging issues in hazardous materials response and establish recommendations for action. Over the course of the two days, many leading authorities addressed the roundtable and provided information and insight into their respective issues.

At the end of the roundtable, the following items were determined to be those that should be addressed by federal agencies and the IAFC. This report is issued with the intent of establishing a direction for action and future discussion by the hazardous materials community. The actions in this report that require new policy statements from the IAFC will be presented to the IAFC Board of Directors for appropriate action. All other issues will begin to be implemented as appropriate.

The position statements developed by the IAFC Hazmat Committee and the participants of the roundtable that are expressed in this report do not necessarily reflect the views of the USFA.

1. Hazardous Materials Identification Methods

IAFC took an active stand opposing the Transportation Security Administration's (TSA) position to remove placards from rail cars and remove any identification (as potential terrorist targets). The committee is looking at the possibilities of changing placards; there are new systems that allow pulling information from the bar code on the rail car.

The committee requested to have a strong oversight of what happens and to be present during testing. The IAFC's position is that no changes to the placards should be made until a better method is created, implemented and proven successful. The committee reaffirmed the position on placards that was taken at the 2002 roundtable. A comment was made that even if there is a system in place, it will be difficult and time consuming to make sure that a new system is implemented throughout the country.

Garry Briese gave an update on the TSA placard workshop and commented on the IAFC's firm position on the placards. The IAFC wants to understand how placards fit in the railroad operational security system. The new system should be used by the first arriving company officer but cannot depend on any significant level of technology (lowest common denominator). Based on the results of the meeting, the IAFC will request to be heavily involved in the development of a new system.

There is no significant field data available to support or reject the utility of placards in the identification of hazmat incidents. The committee advises the IAFC to request from the National Transportation and Safety Board (NTSB) information on research and reports on this subject and ask NTSB to start collecting this data for every hazmat incident.

Confidentiality issue: railroads are not going to share details of their operational security system. Railroad crew members are difficult to identify on the scene of the incident. The IAFC recommends they wear uniforms to be easily recognized.

Garry Briese commented on the document that IAFC produced—*Model Procedures for Responding to Suspicious Packages in a WMD World*—that will be finalized and forwarded to the Homeland Security Council. Two major initiatives that IAFC will be working on in the near future: development of a draft of the National Response Plan and development of a National Incident Management System, HSPD-5

2. Hazardous Materials Operations and Efficiency

★ There is a need to implement working mutual aid agreements and multi-agency response plans throughout the country. Almost all states have a very formal mutual aid agreement, but it is typically a paper plan that is not used on a day-to-day basis. Thus, it is difficult to implement during a major event.

There is a general sense that communities are moving toward larger response systems involving mutual aid agreements and multi-agency response plans. A recommendation was made to reaffirm and carry over 2002 statements.

It is necessary to address communication and intelligence infrastructure. When using mutual aid, reimbursement processes to cover the fire department costs (personnel, equipment) should be set up in advance. The Federal Emergency Management Agency (FEMA) has a national fee scale available through its Web site that fire departments can consider for adoption. California has a five-party agreement that can be used as a template for reimbursing expenses.

- ★ There was discussion on developing standardized triage systems, not only for white powder incidents, but also for other biological and chemical incidents. A recommendation was made to use the draft *Model Procedures for Responding to Suspicious Packages in a WMD World* that the IAFC developed as a baseline document, review it by December 2003 and ensure that it applies to a variety of biological and chemical incidents. The committee will put together a small group of people to solicit protocols from local fire departments.
- ★ The committee will continue to work on developing contingency plans and alternative back-up plans at the state and local level to manage large and multiple hazmat incidents that exceed the capabilities of local or state response agencies. FEMA is working to complete its risk plans by Dec. 31, 2003.

A first responder must understand and be able to make a proper judgment call upon arrival that the incident may be one that his/her department cannot handle with available resources and the department will need to call for assistance from many other agencies.

This certainly would cover many types of incidents including hazmat, biological, biochemical, radiological and dirty bombs, among others.

The IAFC should immediately encourage the development of additional resources. These resources could be any of the following:

1. Local/Regional/State Hazmat Teams
2. Local/Regional/State/Federal EPA
3. Local/Regional/State/Federal Bomb Squads
4. Local/Regional/State Public Health Officials

Additional resources could include one or all of the above. Every fire department should have an SOP/SOG for such responses and a detailed plan on notification, deployment and staging. The primary goal until adequate and properly trained personnel are on scene is to protect the public and the first responders.

- ★ Procedure-Based Capabilities: Establish more reliable and timely on-scene chemical and biological testing capabilities through the use of a layered response matrix, using a procedures-based approach to improve first responder hazmat/risk assessment. This is necessary to enable first responders to accurately determine the appropriate level of response and to improve the decision making ability for implementing safe public protection and incident intervention measures, including but not limited to:

1. **Credible Threat Analysis**
2. **Chemical Substance Test**

Layer I—Detection

- a. pH (or impregnated reactants/paper)
- b. Color metrics
- c. Combustible gas indicator
- d. Electro chemical sensors
- e. Detection

Layer II

- a. Photo ionization
- b. Flame ionization
- c. Infrared spectroscopy
- d. Radiation (specific)
- e. Scintillation

Layer III

- a. Gas chromatograph mass-spectrometer

3. **Biological Presumptive Test**

Layer I

- a. pH (or impregnated reactants/paper)
- b. Turbidity
- c. Handheld assay (immunoassay)
- d. Positive protein

Layer II

- a. Infrared
- b. Polymerase chain reaction
- c. ImmunoElectrochemiluminescent Assay (ECL)

Layer III

- a. Lab culture

- ★ Require the development of standardized equipment lists (SEL) for all federal, state and local implementation and use for hazardous materials, WMD, chemical/biological and medical mass casualty responses. The units should be prepared using the Interagency Board SEL as the threshold template.
- ★ The incident management system and unified incident command system endorsed by the IAFC shall be that which is taught at the National Fire Academy and shall be implemented at all incident operations. This practice shall be implemented as an immediate policy.
- ★ Critical Incident Stress Management program services should be available for emergency responders.

- ★ Hazardous materials team typing shall be developed and implemented at the state and local level and shall follow the template produced by the Office of National Preparedness (FEMA/DHS) "National Mutual Aid Initiative" project team. This is for the purpose of promoting and improving functionality and interoperability of response teams especially during events requiring mutual aid.

3. Department of Justice (DOJ)

The committee recommends that the IAFC take the position that the Office for Domestic Preparedness should support the existing educational system provided for state and local training for hazardous materials and terrorism training as a primary delivery mechanism for fire training and, where it applies, interagency training. The national training strategy should serve as a model for this training, with the exception of those states where the training plan exceeds the national strategy. The training should also be permitted to utilize homeland security funds to deliver this training. This recommendation is not intending to replace or discourage the fire service from attending current DoJ training; instead it is the intent of the committee to provide the fire service with the desired training that meets the fire service recommended consensus standards and state and federal regulations that govern our response capabilities.

4. Emergency Preparedness and Response

There was discussion on the IAFC's position to support the concept that the Emergency Preparedness and Response Directorate of DHS will create a mechanism for a single access point to provide fire service organizations with information, training and guidance concerning hazardous materials, terrorism and weapons of mass destruction.

The IAFC continues to advocate for the single access point (clearinghouse) to provide fire service organizations with information, training and guidance concerning hazardous materials and terrorism. DHS should be that single point of contact.

5. Hazardous Materials/Weapons of Mass Destruction Training

The fire service is significantly outclassed at the federal level, as federal employees and the DoD staff cannot attend National Fire Academy training. The National Response Plan should address this issue. There are models from the National Fire Academy that worked successfully. Development of a National Incident Management System is a great opportunity to conduct interagency training.

- ★ Federal, state and local-level public education programs on hazardous materials, terrorism and weapons of mass destruction should be implemented parallel to fire safety education programs. USFA's Emergency Management Institute (EMI) has developed a training program, *Household Hazardous Materials: A Guide for Citizens*, on hazmat public education regarding hazardous chemicals in the homes. It

is a Web-based interactive independent study course that can be accessed by enrolling at www.usfa.fema.gov and clicking on "For the Fire Service/Virtual Campus." Log on and select "IS-55" from the course catalog to complete it online. Interactive CDs are available upon request.

- ★ Full endorsement should be given for the lead fire service training role to state and local fire training systems. The federal training grants have been discontinued, and support for the states is diminishing.
- ★ A need exists to integrate the development and distribution of curriculum materials to avoid redundancy and to provide programs and materials that are compatible with and easily incorporated into state and local training system curriculums. All curriculums should match or exceed NFPA 472. A means by which more than one million fire fighters can be reached nationwide is necessary.
- ★ Methods should be found for integrating funding sources to ensure that a larger portion of federal funding for first responder hazmat and WMD training is passed to state and local training systems. Results accomplished by the FEMA task force stated that all personnel should be trained to a minimal level of hazmat training.
- ★ Discussion on integrating current federal efforts in articulating first responder hazmat/WMD training standards and requirements.

Terrorism training should not be addressed as a separate issue. It does not matter which office will provide this training. It is important, however, for the training to be consistent and comprehensive. The 2002 guidelines are currently being printed. More ODP money will be funding the specialized training programs. Fire fighters must comply with both ODP and NFPA 472 standards. The committee made a recommendation for the IAFC Board of Directors to take an official position to stay with NFPA 472. The roundtable participants recommend that the IAFC Board of Directors writes a letter to ODP to voice our concerns on this subject.

6. Secure Information

The IAFC has no specific update on this. The IAFC is communicating with the International Association of Chiefs of Police and the National Sheriffs' Association, and all agree they are outside of the intelligence information scope in cases. The IAFC should promote the trusted agent approach (share information with law enforcement).

7. EPA E-Plan

After reviewing the EPA E-Plan over the past year, it is an excellent plan that is a success for the hazmat community.

8. Emerging Issues

The following issues continue to be a concern for the hazmat community:

- ★ It is decided that contingency plans at state and local levels should continue.
- ★ There is a need to continue encouraging interagency cooperation among special teams so that interoperability will run effectively. In past years, the fire service has demonstrated a tremendous effort to tap into resources from law enforcement and even the military. In most cases, law enforcement has embraced the concept of ICS. In Florida, all law enforcement officers have two years to become certified in ICS. In the next 10 years, we can expect a drastic change in the paradigm of law enforcement and in how well they will incorporate ICS into their operations.
- ★ Stakeholders within the hazmat and terrorism response communities must become educated on how to navigate through the federal bureaucracy. The federal government can assist this by developing a single point of contact for all hazardous materials and terrorism resources for first responders. Thus, the IAFC supports the concept that the Emergency Preparedness and Response Directorate at DHS create a mechanism for a single access point to provide fire service organizations with information, training and guidance concerning hazardous materials, terrorism and weapons of mass destruction.
- ★ The IAFC has been a primary stakeholder in providing homeland security and protection since 1873 and as such should deepen its involvement in all phases of the planning and operations of DHS.
- ★ Because first responders will be on the scene operating without outside assistance for hours, if not days, it is vital that funding not be diluted. It is important that the majority of funds reach the intended recipients—those who must mitigate and control the immediate chaos—and not be siphoned in organizational bureaucracy.
- ★ The fire service must consider any unforeseen and sometimes unrealistic public expectations of dealing with all situations immediately.
- ★ High-tech instruments: The committee should advocate for new instrumentation to be received by local hazmat teams. These instruments were once placed within laboratories and operated by laboratory technicians and are now being placed in the field for hazmat units. Education in this area requires coordination and integration. Integration of programs made for the field responders is also necessary.

This includes:

- ★ Basic detection strategies—identify the best practices as a general outline of basic approaches to these events. These protocols will be used to handle a variety of response issues.
- ★ Curriculum identification—Computer-based training, e.g. Dartmouth's Computer-base training on Radiation Detection. Some of the computer simulations that have been created for the National Guard's Civil Support Teams would assist the responders in the educational process of adaptation.
- ★ Protocol for step-by-step application—Most of these instruments are not used daily; however the responder will have to maintain proficiency. This will become increasingly difficult to maintain as more and more of this equipment is placed within fire departments. A step-by-step process would assist these responders with the application. This can be placed within educational institutions such as the National Fire Academy.
- ★ An increased effort should be put forth in educating all responders to the hazards of exposure to pesticides and other hazardous chemicals when responding to incidents involving containerized intermodal shipping equipment. As this method of transporting hazmat increases, so does the potential harm to all responders.
- ★ The committee recommends that developments involving liquefied natural gas- (LNG) powered vehicles be researched and the information made available to the IAFC membership. This includes vehicle fuel systems, liquification technologies and LNG storage containers. This concept is seen as emerging technology that responders should become familiar with.
- ★ The committee recommends that appropriate federal agencies promulgate regulations that would require all intermodal transport containers be placarded and appropriate commodity information accompany the shipment as would be required for all other shipments or similar materials. 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 such as a land bridge with no local delivery intended.
- ★ Illegal, clandestine drug labs have become a significant problem. Programs should be developed to disseminate information to first responders. Drug labs are being set up in various and migrating locations, which leaves first responders with the responsibility of increased decontamination duties. Studies for further review include the program developed by FEMA and a study done by the University of Missouri and State Fire Marshal's office that should be made available to the general public.

The industry must actively support and work with hazmat teams in the areas of funding and expertise in the field. ■

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