

The National Hazardous Materials Fusion Center



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I imagine you are the mayor of a small Midwest town. In the middle of the night, you receive word from your fire chief that a train has derailed in the heart of your town of 5,000. Several tank rail cars marked with chlorine gas labels are laying on their sides in a ditch. Gas is venting from the rail cars and a vapor cloud is moving toward the center of town.

The fire chief has plenty of first responders on scene but is unable to attempt to repair the leaking chlorine rail cars because he is unsure how to proceed in this hazardous environment. What can you do? What resources do you have available to help respond to and mitigate this situation?

One such resource is the National Hazardous Materials Fusion Center. With its secure, Web-based portal, the fire chief has instant access to a wide range of information. Through the fusion center, the fire chief can quickly locate the nearest hazardous materials team in the area or pull down a list of equipment and personnel protective gear needed to respond safely. Essentially, the fire chief has a vast network of professional support on his or her laptop.

A Fusion Center Is Born

The fusion center concept is the result of a cooperative effort between the International Association of Fire Chiefs (IAFC) and the Department of Transportation Pipeline Hazardous Materials Safety Administration (PHMSA). Through a strong partnership between these two organizations, as well as support from other federal, state, and local agencies and groups, the hazardous materials fusion center has been built to serve the first responder community. The center, located at



IAFC headquarters in Fairfax, Va., came online at the end of 2008, and is funded through a one-year pilot federal funds program. Staff from the International Association of Fire Chiefs will manage daily operations. It is anticipated that once the value of the fusion center

For more information about the National Hazardous Materials Fusion Center, visit www.iafc.org and click on the “Hazmat Fusion Center and RIST” link.

has been fully realized, long-term federal funding will sustain operations.

Why This Type of Fusion Center?

With the advent of nearly 60 counterterrorism and law enforcement fusion centers around the country, you may be wondering how this one is different. Those fusion centers were created primarily as a response to 9/11 by the Department of Homeland Security in concert with state and local law enforcement agencies. These law enforcement fusion centers were centered on a need to share the vast network of intelligence across agency borders to thwart any terrorist-type activities from achieving their desired end state. The idea is that terrorists often commit other types of crimes in advance of their main mission, so having access to a person's complete criminal history would help develop a profile of a possible terrorist. These fusion centers have already helped to prevent another terrorist attack and help multiple agencies within the private sector as well as on the federal, state, and local levels to exchange their information and intelligence more readily.

The hazardous materials fusion center's purpose, likewise, is to more formally integrate a network of loosely connected hazardous materials response information from around the country into a central location that can be accessed by anyone with a need to know. Following several high-profile hazardous materials incidents over the past several years,¹ IAFC and PHMSA have decided that their responses could have been better if they had access to information about the best equipment to use, best approach tactics for a particular hazardous chemical, or the location of the nearest trained hazardous materials team. They determined that the fusion center could best meet the needs of the first response community through a three-tiered approach:

- information collection,
- data analysis,
- disseminating best practices.

Step One: Collect Information

The fusion center serves as the repository for hazardous materials incident information collected from actual response cases. This information is collected from several sources, including direct reports to a toll-free phone number, secure Internet connection from hazardous materials response teams, or reports received from regional incident survey teams. These regional teams, or RISTs, are composed of individuals (usually firefighters) who are highly skilled and experienced in the hazardous materials response community.

Each RIST includes a team leader and up to six team members who are first deployed by the fusion center after they receive notification of a significant hazardous material incident. The RIST members will make a request to interview the first responders shortly after the incident comes to a close. The regional incident survey teams will collect information on how well the first responders performed their jobs. The information passed along to the fusion center will be used to develop hazardous materials response techniques, lessons learned, and best practices. In no case will the data be used to condemn or criticize a certain jurisdiction's response actions.

The first two teams were deployed during summer 2008 in Houston, Texas, and Dallas, Texas, and each of the teams reported on several incidents by the end of 2008. The full implementation schedule will place two regional incident survey teams in each of PHMSA's five regions around the country. In addition to hosting this collection of response data, the fusion center will also maintain information on the nation's network of trained hazardous material teams, including location, contact information, capabilities, and equipment. This type of information will be very valuable, especially for those jurisdictions without a trained hazardous materials response team.

Second Step: Analyze Information

As with the other types of fusion centers, collecting information is only the first step. The hazardous materials fusion center will receive the hazardous materials incident reports from the RISTs and create response-specific after-action reports. These reports will summarize the effective practices, planning tools, and resources that were observed to work well during the response. These best practices can serve as points of dis-

cussion or targeted training topics for hazardous materials training programs.

Likewise, if there is a piece of equipment or tactic that resulted in a less-than-desirable outcome, the fusion center will also highlight this information. The fusion center recognizes that it is important for hazardous materials teams to be familiar with highly technical equipment, so part of the analysis will include recommended training. In addition, by having this wealth of information at its disposal, the fusion center will look for trends and patterns to prevent and mitigate hazardous material incidents.

Third Step: Share the Results

The principal point is to create a national database for the free flow of information among all the hazardous materials teams and interested stakeholders. This includes sharing after-action reports, curriculum materials, training drill exercises, and noteworthy hazardous materials conferences. The database will also hold hazardous material shipping information. This information will be available to hazardous materials response teams and national and international decision makers, who are responsible to establish criteria for the safe shipment of these materials.

For instance, the Pipeline Hazardous Materials Safety Administration, Federal Railroad Administration, and Federal Motor Carriers Safety Administration will use the information to improve risk analysis of hazardous materials transportation incidents. It will also improve their ability to better focus outreach, training, and resources to the response community and to improve the safety of the transportation network.

About the authors:

CDR Rick Raksniis is the former chief of the Hazardous Materials Standards Division at the U.S. Coast Guard headquarters. He led a team of chemical engineers and chemists to develop international and domestic standards for the safe transport of hazardous materials by water. Since hazardous materials are transported not only by water but also by rail, air, and on our roads, he maintained strong relations with other federal and industry associations. He was a member of the workgroup that developed the infrastructure for the National Hazardous Materials Fusion Center.

Mrs. Tonya D. Schreiber is the executive director of the Office of Hazardous Materials Safety for the Pipeline and Hazardous Materials Safety Administration at the U.S. Department of Transportation. Before joining PHMSA, Mrs. Schreiber served for 16 years in the Maryland Air National Guard as an industrial hygienist. She is currently assigned to the Maryland Air National Guard state headquarters. She has a Bachelor of Science degree in environmental toxicology from the University of Maryland.

Endnote:

¹ In 2001, a chlorine gas spill from derailed train cars in Riverview, Mich., caused three deaths and 17 injuries. In another train derailment in 2004, chlorine gas killed three people and injured 66 in Macdona, Texas. A 2005 chlorine gas spill from derailed train cars in Graniteville, S.C., caused nine deaths, 631 injuries, and total damages of \$8 million.

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