



Emergency Management and Response Information Sharing and Analysis Center (EMR-ISAC)

INFOGRAM 13-09

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***NOTE:** This INFOGRAM will be distributed weekly to provide members of the Emergency Services Sector with information concerning the protection of their critical infrastructures. For further information, contact the Emergency Management and Response- Information Sharing and Analysis Center (EMR-ISAC) at (301) 447-1325 or by e-mail at emr-isac@dhs.gov.*

Hydrogen Safety

The lightest and most common element in the universe, according to the California Environmental Protection Agency (CALEPA), hydrogen has been safely used for decades in industrial applications. A CALEPA fact sheet states: "Currently, over 9 million tons of hydrogen are produced in the U.S. each year and 3.2 trillion cubic feet are used to make many common products." In fact, the U.S. Department of Energy compares hydrogen very favorably to other fuels.

Hydrogen is not toxic, poisonous, or corrosive. "As a result of its benign nature, hydrogen does not harm the environment or public health." However, considering its potential dangers, the Emergency Management and Response—Information Sharing and Analysis Center (EMR-ISAC) confirmed that hydrogen's physical qualities must be respected and understood to eliminate risks to emergency operations and first responders.

Hydrogen is a flammable, colorless, and odorless compressed gas. It can ignite in combination with as little as 23 percent of air. This means that even small amounts of air in lines or storage tanks are probably hazardous. Additionally, the friction caused by high pressure gas passing through a narrow valve could theoretically create enough heat to ignite hydrogen. Since hydrogen burns with an invisible flame, it also creates the peril of discovering a fire by walking into it.

The EMR-ISAC learned that a hydrogen storage tank valve recently failed at a California manufacturing facility. The resulting leak caught fire and necessitated an immediate response from the local fire department and its hazardous materials team. The possibility of other incidents such as this makes it prudent for emergency departments to increase awareness and take precautions to prevent any harm to responding personnel and their equipment. Some awareness guidance and precautions can be seen at the following links:

- http://h2bestpractices.org/docs/HydrogenPoster_v15.pdf
- <http://www.calepa.ca.gov/EnvJustice/Documents/2005/H2UseNSafety.pdf>

Interagency Threat Assessment and Coordination Group

The President and Congress directed the establishment of the Interagency Threat Assessment and Coordination Group (ITACG) to improve the sharing of information with state, local, tribal, and private sector officials within the scope of the Information Sharing Environment (ISE). The ITACG supports the efforts of the National Counterterrorism Center (NCTC) to produce "federally coordinated" terrorism-related information products intended for dissemination to state, local, tribal, and private sector partners through existing channels established by federal departments and agencies.

The Emergency Management and Response—Information Sharing and Analysis Center (EMR-ISAC) corroborated that the efforts of the ITACG supplement existing analytic, production, and dissemination activities of the National Counterterrorism Center and other organizations such as the National Joint Terrorism Task Force. Specifically, the ITACG coordinates the production and timely issuance of the following interagency products intended for distribution to state, local, tribal, and private sector officials, as well as the general public when appropriate:

- Alerts, warnings, and notifications of time-sensitive terrorism threats to U.S. locations.
- Situational awareness reporting regarding significant events or activities occurring at the international, national, state, and local levels.
- Strategic assessments of terrorist risks and threats to the U.S.

The EMR-ISAC further observed that interested state, local, tribal, and private sector officials can subscribe to the ITACG-ISE news feed and automatically receive notification of updates by clicking on “subscribe” at <http://www.ise.gov/pages/partner-itacg.html>.

NEMSPI Virtual Training

The National Emergency Medical Services Preparedness Initiative (NEMSPI), part of George Washington University’s (non-profit) Homeland Security Policy Institute (HSPI), recently released a Department of Homeland Security (DHS)-funded Emergency Services Sector virtual training and exercise program. The Game-Based Learning (also called “Zero Hour”) is designed to enhance and reinforce the skills and abilities of EMS providers and related public health, emergency management, public safety, and hospital-based medical personnel in specific target capability areas.

Designed for both new and experienced EMS personnel, the Emergency Management and Response—Information Sharing and Analysis Center (EMR-ISAC) verified that NEMSPI’s Zero Hour gives responders the opportunity to construct and implement complex strategies to train and exercise for “real-life” multifaceted situations within a safe virtual environment. Players are tasked to complete a variety of missions, based on the National Planning Scenarios, designed to push players’ skills in four key target capability areas: Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) detection, triage and pre-hospital treatment, information collection and threat recognition, and information sharing and collaboration. Players confront chaos and panic, large numbers of patients, and needs that exceed available resources. Each time responders play, they are given different resources and scene hazards, and different patients to treat.

Although the EMR-ISAC does not endorse products, it did examine a demonstration version of this DHS-funded game at <http://www.nemspi.org/>. To order single or multiple downloads or to acquire additional information regarding “Zero Hour: America’s Medic” game (1.5 GB), interested personnel should visit <http://zerohour.nemspi.org/>. Participants will earn 6 continuing education units (CEUs) upon completion of the game. There is a one-time \$14.95 charge to download the game (to support logistical requirements and DHS data tracking). The EMR-ISAC found that to view the demo game most effectively, it was necessary to open it and patiently wait for several minutes before proceeding.

Specifying PPE

Emergency Services Sector (ESS) departments and agencies know that while purchases of Personal Protective Equipment (PPE) are major financial commitments of limited resources, the gear is essential to protect personnel. Periodic evaluations of existing PPE inventory to determine appropriateness, performance, member satisfaction, and future needs will yield information that can be used for internal review and to prepare federal grant applications. These evaluations are valuable whether or not responder departments are contemplating new acquisitions.

The Emergency Management and Response—Information Sharing and Analysis Center (EMR-ISAC) noted that a recent two-part series from FireEngineering.com targeted departments considering whether to replace existing PPE with more of the same, or to research and select alternative types/brands of PPE. In Part 1, author Tim Pillsworth offers an approach that includes forming a research committee, performing a response analysis, and examining national standards and state or local rules. Also discussed are interview processes, manufacturer presentations, preliminary specifications/testing, final specifications, bidding, sizing personnel, and delivery and in-servicing. These steps can be seen at http://www.fireengineering.com/articles/article_display.html?id=356595§ion=sponsored&subsection=GLOBE&dcmp=GLOBE.

Technical aspects of specifying PPE are the focus of Part 2 of the series. Through text and photos, PPE performance characteristics such as trap tear and taber abrasion resistance, conductive and compressive heat resistance, total heat loss, thermal protective performance, reinforcement, reflective materials, thermal liner, moisture barrier, outer shell, color, and accessories, are highlighted and explained at http://www.fireengineering.com/articles/article_display.html?id=356598§ion=sponsored&subsection=GLOBE&dcmp=GLOBE.

The EMR-ISAC reminds ESS organizations considering equipment-related funding outlays of the Department of Homeland Security-sponsored web-based clearinghouse maintained by the Responder Knowledge Base (RKB). The searchable database provides information on responder equipment, training, and services. To register as an RKB user, or to access the database as a "guest," visit <https://www.rkb.us/>.

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REPORTING NOTICE

The National Infrastructure Coordinating Center (NICC) within the Department of Homeland Security (DHS) Office of Infrastructure Protection is the central point for notifications regarding infrastructure threats, disruptions, intrusions, and suspicious activities. Emergency Services Sector personnel are requested to report any incidents or attacks involving their infrastructures using at least the first and second points of contact seen below:

- 1) NICC - Voice: 202-282-9201, Fax: 703-487-3570, E-Mail: nicc@dhs.gov
- 2) Your local FBI office - Web: <http://www.fbi.gov/contact/fo/fo.htm>
- 3) EMR-ISAC - Voice: 301-447-1325, E-Mail: emr-isac@dhs.gov, fax: 301-447- 1034, Web: www.usfa.dhs.gov/subjects/emr-isac, Mail: J-247, 16825 South Seton Avenue, Emmitsburg, MD 21727