

materials and others having care, custody, and control of hazardous materials, enabling them to make better decisions in the management of spills. It incorporates proprietary online spill management systems and provides spill generators and emergency responders with fast access to information needed to expedite response and remediation of haz-mat spills.

Global positioning systems and other technologies provide real-time information about equipment and materials being transported. Using onboard computers, vehicle tracking, and wireless communications technology that is already on vehicles, this system can provide real-time information about cargo and equipment, the vehicle's location, and the nature of the incident within minutes.

Wireless systems enable the driver to send an instant alert by the wireless service provider in a haz-mat emergency. Routed electronically, the message would be received at Spill Center, a 24-hour/7-day nationwide resource for spill generators and responders. The Center would alert emergency responders, providing the exact location of the vehicle and additional details as they become known. Vehicle tracking technology could also be configured to determine if a haz-mat delivery has been delayed or a route changed for some unexplained reason.

The electronic emergency response management system was demonstrated for the first time in the fall of 2001, during the COHMED haz-mat training conference conducted by the U.S. DOT's Research and Special Programs Administration (RSPA). RSPA is responsible for regulating hazardous materials transportation safety. Attendees at the demonstration included fleet safety managers, emergency responders, and law enforcement personnel—all of whom were well aware of the potential of haz mats as weapons of mass destruction in the wrong hands.

Representatives from wireless messaging companies discussed how satellite tracking and wireless communications capabilities are linked electronically to a 24-hour/7-day emergency call center by electronic message routing systems. Spill Center personnel demonstrated electronic spill-reporting systems and technologies, online contingency planning capabilities, and response management systems.

Telematic services that track vehicles and relay real-time information to fleet operators have become standard in the rental/leased vehicle market. Packages for commercial

trucks combine global positioning satellites (GPS) and cellular technology in hidden installations, which include a GPS receiver, a wireless transceiver, an onboard computer, and a GPS/cellular antenna.

A truck's location is tracked by GPS, while information about the vehicle and cargo is transferred by the cellular networks to a network operations center, which can relay messages. The fleet operator, using a secure password, can access information in real time over the Internet.

#### **REGULATORS BECOMING STRICTER ON SPILL NOTIFICATION RULES**

As part of the nationwide effort to improve haz-mat security, local and state regulatory agencies are becoming stricter about enforcing spill notification requirements. Texas requires spill generators to report incidents within one hour of a spill. A county in Ohio has a 30-minute reporting requirement. Transporters are advised to stay current with changing regulations related to haz-mat releases. The only notice many transporters ever receive is the one that arrives by mail stating the company is in violation for failure to file a report on the incident.

For transporters, being prepared for a spill is the key to handling it quickly and minimizing damage to the environment. Contingency planning is the place to start. The contingency plan ensures that the right people in the client organization are notified, the right internal and external reports are triggered, and preferred contractors are contacted. Most important is putting that contingency plan in an easily accessed, centralized location such as a secure Web site.

An Internet-based approach similar to the Electronic Emergency Response System can also be used to improve the robustness of the information infrastructure responsible for transportation operational controls. A secure Web site and database of vulnerable target information could be created and maintained. It could identify water supplies, bridges, important buildings, monuments, and other potential targets of terrorists.

The system would leverage commercial cellular and satellite-tracking systems already installed on haz-mat transport vehicles. An alarm would be sounded whenever a haz-mat vehicle belonging to a participating fleet approaches any of the vulnerable targets in the system, allowing time for government to intervene.

#### **ONLINE SYSTEM IMPROVES HAZ-MAT SPILL MANAGEMENT**

Spill Center launched its Internet-based support capabilities in November 2000. Clients and nonregistered users alike can access services through the site, which include reporting a spill, finding a contractor, obtaining disposal options, and requesting a callback. Also at the Spill Center Web site is an "Ask the Expert" feature. It enables users to ask questions related to spills, cleanup activities, and regulations. Spill Center personnel, who include legal, environmental, and technical specialists, answer the questions.

Specialized Web conferencing capabilities are available through the Spill Center Web site, enabling spill generators and responders to log on and make informed decisions based on information displayed in secure areas. Documents with information important to the response are displayed and updated in real time. Access is available to many people at the same time, keeping everybody associated with the incident on the same page.

The electronic emergency response management system directly benefits government regulatory authorities that require access to information and resources to clear incidents. Industry tends to confuse the government's demand for more access to information with a desire to control the incident or control the spill generator or the moment-to-moment response, remediation, and disposal. Government feels that industry has for too long denied it or has failed to provide access to resources that would allow agencies to fulfill their mandate of law enforcement and protection of public safety and health and the environment.

With the electronic emergency response management system, the right tools are available to manage inventory for response and remediation, along with immediate access to critical information, even transporters' contingency plans that are key to coordinating cleanup efforts. The system gives first responders and planning agencies access to resources needed to protect the public while enabling industry to maintain the control it needs to limit liability and minimize damages to valuable equipment and cargoes.

Although these technologies are not new, the integration of them into a comprehensive system dedicated to the management of emergency response and remediation is unique and beneficial to industry and the public interest. ■