

FEMA REVIEW OF PENNSYLVANIA EXPLOSION SHOWS NEED FOR HAZARDOUS MATERIALS TRAINING FOR EMERGENCY RESPONDERS

WASHINGTON, D.C. - A technical review of the devastating explosion at Concept Sciences, Inc. (CSI) in Pennsylvania, which claimed five lives and caused \$5 million in damage, is being released by the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) today. The explosion in Hanover Township could be seen for seven miles, produced a four-foot-deep crater and damaged 11 adjacent buildings to CSI, which manufactured free-base hydroxylamine, a semiconductor cleaner.

"This report offers valuable insights into response to possible hazardous materials incidents that will help prevent deaths and injuries in the future," said Michael D. Brown, Under Secretary of Homeland Security for Emergency Preparedness and Response. "The report, for instance, shows that initial responders did not know what materials were involved or the potential for subsequent explosions during the rescue process."

The review, compiled by the U.S. Fire Administration (USFA), also noted that it was 60 to 80 minutes into the incident before the hazardous materials team became fully operational and able to conclusively identify the product, and that some emergency personnel entered the area without proper protective clothing. Other lessons learned cited in the report include:

- \* The incident response involved three agencies from three counties, but there was no set radio frequency that was common;
- \* Although more than 400 personnel responded, in addition to agencies from the local, state and federal level, a unified incident command system and solid emergency management plan allowed the incident to be successfully managed;
- \* Extreme caution must be exercised when search and rescue dogs are used in a situation involving hazardous materials. Chemicals that are caustic to the respiratory tract can severely injure a dog and permanently reduce or destroy their olfactory abilities;
- \* Fire investigators, state police officers and coroner's personnel who responded did not have a significant amount of training in handling hazardous materials incidents and they lacked the protective clothing and respiratory devices requires to safely work an incident of this type.

"Any event that results in five firefighters losing their lives, and leads to so many injured, must be reviewed for lessons learned in order to protect firefighters in the future," said U.S. Fire Administrator R. David Paulison. "One doesn't have to look only at large scale events to understand the interoperability and training challenges we must continue to commit ourselves to solving."

USFA develops reports on selected major fires or emergency incidents, usually involving multiple deaths or a large loss of property. The objective reviews are intended to uncover significant "lessons learned" or new knowledge about firefighting or to underscore ongoing issues in fire service. USFA, which has no regulatory authority, sends an experienced investigator to the community after a major incident only after conferring with local fire authorities.

After receiving calls of the explosion on Feb. 19, 1999, firefighters arrived at CSI to find a collapsed building, smoke drifting from the blast site and a small fire of little significance. Water was pouring from the demolished automatic sprinkler system and the area was strewn with debris and crushed cars. Six people were trapped and rescue efforts were needed. The FEMA-sponsored Pennsylvania Urban Search and Rescue Task Force, from Harrisburg, Pa., was activated and responded. The local Red Cross provided two food vans at the scene for emergency workers and a nearby facility for family members of those involved in the explosion. The incident lasted for nearly four days. The investigation into the cause of the explosion is continuing.

A copy of the full report can be ordered by going to:  
[www.usfa.fema.gov/applications/publications/tr127.shtm](http://www.usfa.fema.gov/applications/publications/tr127.shtm).

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FEMA REVIEW OF AMTRAK DERAILMENT SHOWS RELEVANCE OF 'ALL-HAZARDS'  
TRAINING AND PLANNING

WASHINGTON, D.C. - A technical review of an Amtrak derailment in Nodaway, Iowa, which affected 225 passengers and 16 crewmembers and resulted in one death, is being released by the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) today. According to the review, planning that included guidelines for search

and rescue operations after a tornado contributed to the success of the rescue.

"This report offers valuable insights that will help prevent deaths and property loss in the future," said Michael D. Brown, Under Secretary of Homeland Security for Emergency Preparedness and Response. "The benefit of an 'all hazards' approach to incident planning is underscored by the success of the first responders who had no specific training related to derailments, but were able to respond appropriately to the situation."

The review, compiled by the U.S. Fire Administration (USFA), also noted the role of the inaccessible site in evacuating passengers. The train had derailed in a remote area bordered by open pasture and farmland, and emergency responders had to drive on the roadbed of a parallel track to reach the site. The difficulty of reaching the site, however, helped law enforcement set up a secure perimeter and keep curiosity seekers away.

Other lessons learned cited in the report include:

- \* The volume of radio traffic quickly overwhelmed the two-way communication system and limited 9-1-1 telephone lines. Cellular telephones were also ineffective. Incident planning should include provisions for alternate means of communications;
- \* Train doors jammed when the derailment occurred and the train lost electrical power. The windows were not breakable and the cars were two stories high with narrow stairways, delaying search and research efforts;
- \* The absence of emergency lighting in the train contributed to the disorientation of the passengers as they tried to exit the train;
- \* Freezing temperatures at the time of the derailment helped stabilize the unpaved road bed but made shelter an issue for those non-injured passengers who were evacuated; and
- \* The number of ambulances was quickly exhausted and school buses and privately owned vehicles were pressed into service to move passengers to safety. Future planning for a similar event should identify the types and sources for equipment that could be required in a multiple casualty incident.

"With so many emergency responders from local and state agencies responding to this incident, one can only imagine the challenges faced. These responders overcame remoteness of the location, darkness, cold, communication issues and a lack of specific training to rescue nearly 250 people," said US Fire Administrator R. David Paulison. "Lessons learned from this report underscore the importance of preparing, training and exercising for all hazards, by all first responders and departments."

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Amtrak's westbound California Zephyr passenger train derailed in the evening of March 17, 2001 in a rural section of Iowa. Two engines and nine of the 15 cars left the tracks. The Corning Volunteer Fire Department was hosting its annual fundraiser at the time of the derailment and the entire department was able to immediately respond. Spouses of firefighters also went into action to assist the local hospital and to shelter and feed the uninjured passengers. The rescue lasted about three hours. In addition to one passenger death, 96 people were injured and transported to six area hospitals.

A copy of the full report can be ordered by going to:  
[www.usfa.fema.gov/applications/publications/tr143.shtm](http://www.usfa.fema.gov/applications/publications/tr143.shtm).