

Log # 6520

NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

ISSUED: November 29, 1983

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Forwarded to:

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International Society of Fire  
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SAFETY RECOMMENDATION(S)

I-83-1

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About 11:00 a.m., e.s.t., on October 13, 1982, an eastbound tractor/cargo-tank semitrailer, owned and operated by Matlack, Incorporated, overturned when its driver took evasive action to avoid a head-on collision with a westbound pickup truck with another pickup truck in tow that crossed the centerline on State Route 299, approximately one-fourth mile west of Odessa, Delaware. The tank trailer contained 5,600 gallons of divinylbenzene (DVB), 150 gallons of which leaked from the tank through a clean-out cap and a pressure relief device in the dome. As a result of the accident, five persons were treated for injuries at a local hospital; four (including the two Matlack drivers) were released and one was admitted for further treatment. In addition, 48 emergency response persons were treated for respiratory problems and skin rash associated with exposure to the DVB.

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Approximately 100 emergency response persons provided assistance at the accident site, including 16 fire companies, several rescue units, and at least 3 police jurisdictions. Security around the accident scene was established within minutes of the first-arriving police official, but emergency service vehicles were not restricted from entering the area. Thus, for approximately 1 hour, numerous response personnel moved freely around and near the overturned and leaking tank. About 1 hour after the accident, 48 emergency response persons began to experience exposure symptoms and were evacuated from the site. Three contamination zones were then established to control or restrict the movement of the remaining on-scene personnel.

The rapid response to this accident by a variety of outside emergency groups was predictable based on past history and current planning practices by most communities. In a recent survey of emergency service leaders, 1/ 93.6 percent have prepared mutual aid or multijurisdictional agreements with surrounding communities to provide operational and reserve resources in the event of a large scale accident. However, if these resources are not properly managed, the safety and command problems presented may outweigh their potential usefulness, especially in an accident involving the release of hazardous materials.

The size-up tasks in accidents involving the release of hazardous materials often are more difficult than those in other accidents because greater care and resources are necessary to determine the harmful nature of the hazardous material(s), the equipment and protective measures needed to handle the hazardous materials, and whether or not an evacuation may be warranted. Moreover, the size-up tasks are often compounded by the early influx of emergency response groups whose potential contributions are only presumptive and whose personal exposure to risk has yet to be determined at the first stages of the response. Because of the possible threat to responding personnel and in order to prevent undue congestion in the immediate area, responding emergency personnel should be held outside the immediate area until their specific contributions and safety have been reasonably established.

The Safety Board believes that the large number of injuries resulting from the small amount of product released in the accident at Odessa could have been prevented or reduced through early and total control of access to the scene. Such control would have prevented the exposure of the then unneeded emergency response personnel by allowing the on-scene commander to restrict exposure of personnel to only those essential for gathering information on the development of an emergency response strategy.

1/ International Association of Fire Chiefs, Disaster Planning for Fire Chiefs, Final Report, July 1980.

The Safety Board has examined several community emergency plans and planning guidelines published by a variety of sources. All indicated the need for immediately establishing security points at a safe distance around the accident; none of the plans, however, recommended that arriving emergency response groups be marshalled at these security points as a means to reduce congestion and limit personnel exposure during size-up activities.

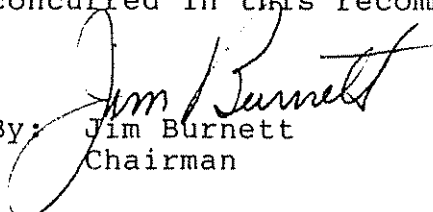
The lack of experience and training in hazardous materials accidents among the response personnel in this accident may have contributed to the injuries; however, the Safety Board is concerned that the uncontrolled access of emergency response personnel to hazardous materials accident sites is not well recognized throughout the emergency response profession as involving safety hazards and possible interference with prompt initial size-up activities.

Therefore, the National Transportation Safety Board recommends that the International Association of Fire Chiefs, the International Association of Chiefs of Police, and the International Society of Fire Service Instructors:

Inform its membership, through emphasis in training, publications, and other means, of the safety and command benefits in restricting the access of emergency response groups to hazardous materials accident sites until their potential exposure to safety hazards and the need for their response activities can be determined. (Class II, Priority Action) (I-83-1)

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility ". . . to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (P.L. 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendations and would appreciate a response from you regarding action taken or contemplated with respect to the recommendations in this letter.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and McADAMS, BURSLEY, and ENGEN, Members, concurred in this recommendation.

By:   
Jim Burnett  
Chairman