

Log# R-6690



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: MAR - 5 1997

In Reply Refer To: R-96-79

Mr. Gary L. Briese
Executive Director
International Association of Fire Chiefs
4025 Fair Ridge Drive
Fairfax, Virginia 22033-2868

About 4:10 a.m. on February 1, 1996, Atchison, Topeka and Santa Fe Railway Company (ATSF) freight train H-BALT1-31, en route from Barstow, California, to Los Angeles, was traveling westbound on the ATSF south main track when it derailed at milepost 60.4 near Cajon Junction, California. After the derailment and the subsequent rail car pileup, which involved five cars containing hazardous materials, a fire ignited that engulfed the train and the surrounding area. The conductor and the brakeman sustained fatal injuries; the engineer suffered serious injuries.¹

Once the ATSF System Operations Center had confirmed that freight train H-BALT1-31 had derailed and that hazardous materials likely had been released and were involved in the fire, the ATSF promptly notified the California Office of Emergency Services and the National Response Center. As a result, the appropriate State and Federal agencies were notified in a timely manner. The system operations center provided copies of the train consist also in a timely manner to the California Department of Forestry and Fire Protection and the San Bernardino County Communications Center. In addition, the incident commander had other technical resources available on the properties and the hazards of the chemicals on the train. Consequently, from the onset of the emergency response operations, the first responders to arrive at the scene and the incident commander had sufficient preliminary information about the hazardous materials on the train and which products were in each tank car.

¹For more detailed information, read Railroad Accident Report--*Derailed Freight Train H-BALT1-31, Atchison, Topeka and Santa Fe Railway Company, near Cajon Junction, California, on February 1, 1996* (NTSB/RAR-96/05)

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However, following this initial exchange of information, no direct notification of the chemical shippers was made because of miscommunications between personnel at the system operations center about the notification of the Chemical Transportation Emergency Center. Because the incident commander believed that he had sufficient information about the hazardous materials involved and assumed someone would contact the emergency center, he did not direct that the center be notified. The Chemical Transportation Emergency Center, which can provide a communications link between the chemical manufacturers, shippers, and emergency response agencies, was initially contacted by the California Environmental Protection Agency about 7 hours after the accident. Shippers, including the Rohm and Haas Company, learned that their products were in the derailment when the Burlington Northern and Santa Fe Railway Company logistics department contacted them about late or lost shipments.

Because of its concerns about the polymerization of butyl acrylate and the potential overpressurization of the tank car, Rohm and Haas immediately attempted to contact the ATSF and the incident command center. The Rohm and Haas technical experts in Deer Park, Texas, faxed guidance about the decomposition and polymerization of the product to the incident command center. However, Rohm and Haas encountered difficulties obtaining accurate information on the status of the butyl acrylate tank car until its response team arrived and inspected the isolated butyl acrylate tank car on the afternoon of February 4.

Although the technical information faxed by Rohm and Haas to the incident command center was received and reviewed, emergency responders were not able to positively identify the butyl acrylate tank car and most of the other tank cars because of the fire, which had burned away the identification marks and numbers on the tank cars. Because identification of the butyl acrylate car now depended on identifying unique fittings and features of the tank car, relying on the technical resources that Rohm and Haas could provide became imperative. Had the Rohm and Haas personnel been early on scene, they could have quickly determined on the morning of February 4 after the discovery of the unidentified, venting tank car that it was not the butyl acrylate tank car, and the subsequent evacuation and the shutdown of the underground pipelines might have been averted. In addition, the Rohm and Haas personnel would have also been available during the removal of the butyl acrylate tank car from the wreckage to ensure that the tank car was left upright to facilitate its venting through its safety relief valve and to verify the condition of the tank car. The ATSF wreckage clearing personnel and the incident commander would have then known that the tank car was full and still a danger.

The ATSF superintendent of field operations, who was primarily responsible for wreckage clearing operations, was unsure of the number of pressure and nonpressure tank cars in the train. He believed that 13 tank cars derailed and that 10 and 3 were nonpressure and pressure tank cars, respectively. Twelve tank cars had derailed, and only one was a pressure tank car. Although identification of specific tank cars was extremely difficult, the process may have been facilitated had the tank car experts from the Association of American Railroads Bureau of Explosives or the other chemical shippers been consulted expeditiously. The bureau or the shippers could have provided certificates of construction, design drawings, and other documentation and records to verify the number of pressure tank cars and general service tank cars in the train, which tank cars were jacketed, the capacity of each tank car, and any distinguishing features. Had this information been obtained, the operations superintendent and other personnel, involved with identifying the tank cars and assessing their condition, would have known that a single pressure tank car containing butyl acrylate was in the train. Knowing the distinguishing features of a pressure tank car, such as protective domes and no bottom outlet valves, they would have been better able to identify the butyl acrylate tank car. Neither a carrier nor an incident commander are required to contact the Chemical Transportation Emergency Center, hazardous materials shippers, or bureau of explosives; however, these resources can provide specialized technical assistance about the hazardous materials and tank cars in an accident.

Chemical shippers can often assist emergency responders in the identification, handling, and off loading of tank cars transporting hazardous materials. Rohm and Haas, the other chemical shippers, and the bureau of explosives were not expeditiously contacted or requested to provide technical support. Therefore, the Safety Board concluded that the ATSF officials and emergency responders failed to effectively utilize the technical resources that could have facilitated the identification and condition of the butyl acrylate tank car and the other derailed tank cars in the train.

The Association of American Railroads, Chemical Manufacturers Association, and other associations representing the chemical and transportation industries jointly sponsor the nationwide Transportation and Community Awareness and Emergency Response outreach program, which is designed to assist communities in the development and evaluation of their emergency response plans for transportation incidents involving hazardous materials. Member companies of the sponsoring associations work with local emergency planning committees and participate in exercises and training with local emergency response agencies to test individual response plans. Although this community outreach program has fostered greater communication and coordination between local emergency planners, carriers, and chemical shippers, the events in this accident indicate that a renewed emphasis is needed for railroad personnel and emergency responders in a derailment involving the release of hazardous materials to utilize available technical resources and expertise. Therefore, the Safety Board believes that the International Association of Fire Chiefs, the Association of American Railroads, and the Chemical Manufacturers Association should develop, in cooperation, and distribute to their members information reemphasizing the technical data and assistance that can be provided through the Chemical Transportation Emergency Center, the Association of American Railroads Bureau of Explosives, and the chemical shippers when tank cars transporting hazardous materials are involved in a train derailment.

The difficulties encountered in this accident by emergency response personnel in identifying individual tank cars could have been greatly alleviated through greater coordination with the chemical shippers, the tank car owners, and the bureau of explosives personnel. Coordination between the railroad, emergency responders, and the appropriate experts remains the most effective means to minimize the danger to the public and emergency response personnel from accidents involving tank cars that contain hazardous materials.

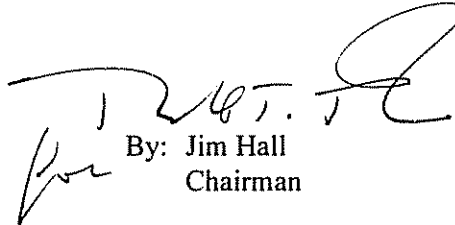
Therefore, the National Transportation Safety Board recommends that the International Association of Fire Chiefs:

Develop, in cooperation with the Association of American Railroads and the Chemical Manufacturers Association, and distribute to your members information reemphasizing the technical data and assistance that can be provided through the Chemical Manufacturers Association Chemical Transportation Emergency Center, the Association of American Railroads Bureau of Explosives, and the chemical shippers when tank cars transporting hazardous materials are involved in a train derailment. (R-96-79)

Also, the Safety Board issued Safety Recommendations R-96-67 through -69 to the Burlington Northern and Santa Fe Railway Company, R-96-70 through -73 to the Federal Railroad Administration, R-96-74 through -78 to the Association of American Railroads, and R-96-80 to the Chemical Manufacturers Association.

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" (Public Law 93-633). The Safety Board is vitally interested in any action taken as a result of its safety recommendations. Therefore, it would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter. Please refer to Safety Recommendation R-96-79 in your reply. If you need additional information, you may call (202) 382-6840.

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in this recommendation.



By: Jim Hall
Chairman