

mendations which did not take into account the full range of hazards in such situations.

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VI. RECOMMENDATIONS

The National Transportation Safety Board recommends that:

- 1. The Missouri Pacific Railroad Company take the necessary action to ensure that affected employees understand and comply with Federal regulations pertaining to the operation of trains. (Recommendation No. R-72-41)
- 2. The Atchison, Topeka and Santa Fe Railway Company and the Missouri Pacific Railroad Company initiate programs to train affected employees in proper procedures to follow at accidents involving hazardous materials. These procedures should include methods for identification of and communication with local emergency service personnel. (Recommendation No. R-72-42)
- 3. The Hazardous Materials Regulations Board hold in abeyance the establishment of a hazard-information system (Docket HM-103) until it develops the criteria which a regulatory threat-information system should address. These criteria should be solicited from and documented by the various parties at risk. (Recommendation No. R-72-43)
- 4. The Secretary of Transportation initiate the development of a logical hazardous materials classification theory which will establish a rational basis for classifying hazardous materials, handled under normal transportation conditions and in transportation emergencies as well. (Recommendation No. R-72-44)
- 5. The National Fire Protection Association, and similar standard-setting organizations, establish documented quality standards and quality control procedures for developing recommended practices to combat transportation emergencies which involve

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hazardous materials. These standards and procedures should include a requirement for a technical safety analysis of their applicability and the risks associated with their use. (Recommendation No. R-72-45)

The benefits that will be derived through the implementation of Recommendations 3, 4 and 5 will be continuous, but also will require some time to become fully effective. Recognizing this, the Safety Board reiterates and emphasizes the importance of the following recommendations made in previous accident reports:

Railroad Accident Report, Southern Railway Company, Laurel, Mississippi, January 25, 1969.

- "5. The Safety Board recommends that the Association of American Railroads and the American Short Line Railroad Association develop plans that will result in the fire chief of each community through which the track of a member road passes knowing where immediate information can be obtained, describing the location and characteristics of all hazardous materials in any train involved in a train accident that affects a community. This recommendation can be accomplished in a relatively short time regardless of the level of training which may be achieved later by fire departments." (Recommendation No. R-69-22)

Railroad Accident Report, NTSB-RAR-70-2, Illinois Central Railroad Company, Glendora, Mississippi, September 11, 1969:

- "2. The Federal Railroad Administration initiate research and development to provide prototype models of freight train braking systems
 - (a) capable of providing shorter stopping distances which nearly approach the theoretical limit under all conditions of loading and length of trains;

- (b) capable of stopping a train in the emergency applications now required by regulations without internal collisions, train separations, or damage to the train or its lading;
- (c) capable of propagating brake application, both service and emergency, throughout the

length of a train more expeditiously and surely;

- (d) capable of more rapid application of the full intended stopping force to the rails at each car after the application signal is received at each car." (Recommendation No. R-70-16)

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

/s/ JOHN H. REED
Chairman

/s/ FRANCIS H. McADAMS
Member

/s/ ISABEL A. BURGESS
Member

/s/ WILLIAM R. HALEY
Member

Louis M. Thayer, Member, was not present and did not participate in the adoption of this report.

December 13, 1972.