



# National Transportation Safety Board

Washington, D.C. 20594

August 12, 1992

Office of the Chairman

Mr. Douglas B. Ham  
Acting Administrator  
Research and Special Programs Administration  
U.S. Department of Transportation  
400 7th St., S.W.  
Washington, D.C. 20590

Dear Mr. Ham:

Thank you for your letter of June 29, 1992, responding to National Transportation Safety Board Safety Recommendations H-92-1 through -6, which were issued to the Research and Special Programs Administration (RSPA) as a result of the Safety Board's special investigation of cargo tank rollover protection on highway cargo tanks.

Safety Recommendation H-92-1 urged the RSPA to provide cargo tank manufacturers with specific written guidance about (a) the factors and assumptions that must be considered when calculating the loads on cargo tank rollover protection devices in determining compliance with existing Department of Transportation performance standards; and (b) acceptable means to shield and protect the top-mounted closure fittings on all bulk liquid cargo tanks.

The Safety Board notes the RSPA's position that it would be more cost effective and beneficial if specific guidelines concerning the design of rollover protection devices were developed and implemented by industry. The Safety Board is aware that the Truck Trailer Manufacturers Association (TTMA) has a cargo tank engineering committee, which develops guidance materials that are published by the TTMA in technical bulletins, and that the TTMA does publish recommended practices for the cargo tank industry. However, the development and use of consensus standards is not germane to this recommendation. The RSPA has already adopted standards for rollover protection devices on bulk liquid cargo tanks. The Safety Board noted in its recommendation letter to the RSPA that the TTMA and other cargo tank manufacturers have expressed concerns about the lack of written guidance from the RSPA on how to calculate the loads, and how to determine if rollover protection devices, as designed, comply with the existing standards.

The alternative approach that the RSPA is suggesting does not provide a solution to this problem. The TTMA and the cargo tank manufacturers would still be forced to interpret the existing standards and make assumptions on how to comply with the standards. The Safety Board remains convinced that the RSPA should develop its own standards and provide the written guidance that is needed for the cargo tank industry to comply with the performance standards for rollover protection devices. Clearly the acceptability and effectiveness of the guidance



could be enhanced if the RSPA develops the guidance with the help of the TTMA and the cargo tank manufacturers. Pending your response, Safety Recommendation H-92-1 is classified as "Open--Unacceptable Response."

Safety Recommendation H-92-2 urged the RSPA to assist the Federal Highway Administration (FHWA) with the evaluation of the design of the rollover protection devices installed on all cargo tanks manufactured by the Acro Trailer Company and by New Progress, Incorporated, to determine if the cargo tanks comply with existing Department of Transportation (DOT) standards. The Safety Board notes that the RSPA will assist the FHWA in this effort. We request that the RSPA advise the Safety Board of your specific efforts to assist the FHWA, the projected completion date of this evaluation, and provide periodic updates on the status of this work. Pending completion of the evaluation, Safety Recommendation H-92-2 is classified as "Open--Acceptable Response."

Safety Recommendations H-92-3, -4, and -5 urged the RSPA to assist the FHWA in improving the performance of the rollover protection devices on bulk liquid cargo tanks by: (1) modeling and analyzing the forces that can act upon rollover protection devices during a rollover accident (H-92-3); (2) promulgating performance standards for rollover protection devices that are based on the engineering modeling and analysis (H-92-4); and (3) phasing out from hazardous materials service the use of all cargo tanks that fail to meet the new performance standards (H-92-5).

The Safety Board notes that the RSPA will assist the FHWA in the modeling and analysis of the forces that can act upon rollover protection devices during an accident. The Safety Board also notes that the RSPA will assist in the development of new performance standards and the phase-out of cargo tanks that do not meet the new performance standards if the results of the modeling and analysis indicate such action is necessary. The Safety Board requests that the RSPA provide their specific actions to assist the FHWA, periodic updates on the progress of the modeling and analytical work, and a projected completion date. Pending your response and the completion of the engineering modeling and analytical work, Safety Recommendations H-92-3, -4, and -5 are classified as "Open--Acceptable Response."

Safety Recommendation H-92-6 urged the RSPA to implement, in cooperation with the FHWA, a program to collect information necessary to identify patterns of cargo tank equipment failures, including the reporting of all accidents involving a DOT specification cargo tank. The Safety Board notes that the RSPA is examining the format and contents of DOT Form F 5800.1 reports (hazardous materials incident reports) and that the FHWA is concurrently conducting a detailed review of the data received on cargo tank accident failures from FHWA's MCS 50-T accident reports. Further, the RSPA and the FHWA accident reporting systems will be compared and correlated to provide a comprehensive review of all accidents involving DOT specification cargo tanks.

Although these actions are positive steps, they do not specifically address the underreporting of accidents or the inadequately reported and recorded information. Therefore, the Safety Board would appreciate details about plans to address accident and data reporting deficiencies. Pending your response, Safety Recommendation H-92-6 is classified as "Open--Acceptable Response."

Sincerely,



Carl W. Vogt  
Chairman

cc: Mr. Donald Trilling  
Director  
Office of Transportation Regulatory Affairs