



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

FEB - 2 1998

The Honorable Jim Hall
Chairman
National Transportation Safety Board
Washington, DC 20594

Dear Chairman Hall:

The purpose of this letter is to report the status of the Research and Special Programs Administration's (RSPA) action on a rail-related National Transportation Safety Board (NTSB) safety recommendation R-92-23. The recommendation followed an NTSB special investigation on the inspection and testing of railroad tank cars. The recommendation states:

Develop and promulgate, with the Federal Railroad Administration (FRA), requirements for the periodic testing and inspection of rail tank cars that help to ensure the detection of cracks before they propagate to critical lengths by establishing inspection intervals that are based on the defect size detected by the inspection method used, the stress level, and the crack propagation characteristics of the structural component (requirements based on a damage-tolerance approach).

On September 21, 1995, RSPA published a Final Rule, [60 FR 49048], requiring each tank car facility to develop procedures for evaluating the inspection and test techniques employed, including the accessibility of the area to be tested, the sensitivity and reliability of the techniques, and the minimum detectable crack length. This requirement will improve the detection of cracks before they propagate to critical lengths.

In addition to the RSPA Final Rule, FRA has funded a research contract to establish minimum thresholds of damage detection by the use of probability of detection curves. In other areas of research, FRA and industry are exploring methods for performing a reliability assessment of the tank structure, such as damage tolerance analysis. The analysis will help to establish inspection intervals and techniques based on the stress level and crack propagation characteristics of the structural components.

Together, the regulations and on-going research will help ensure the safety and reliability of the in-service tank car fleet. Enclosed is a copy of the September 21, 1995, Final Rule for your information. Based on our actions to date, I ask that this recommendation remain in "Open-Acceptable Action" status. I will keep you informed of our progress.



federal register

Thursday
September 21, 1995

Part II

Department of Transportation

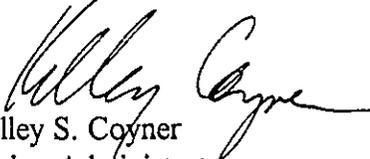
**Research and Special Programs
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49 CFR Part 171, et al.

**Crashworthiness Protection Requirements
for Tank Cars; Detection and Repair of
Cracks, Pits, Corrosion, Lining Flaws,
Thermal Protection Flaws and Other
Defects of Tank Car Tanks; Final Rule**

If you have any questions, please contact me or Mr. William E. Vincent, Director of the Office of Policy and Program Support, at (202) 366-4831.

Sincerely,

A handwritten signature in cursive script, appearing to read "Kelley Coyner".

Kelley S. Coyner
Acting Administrator

Enclosure