

requirements to allow faster evacuation from school buses. Specifically, the final rule increased the number of emergency exits in larger school buses, improved access to side emergency doors, and improved the visibility of the emergency exits. These amendments have made possible shorter evacuation times from a school bus in case of fire or other emergency situations (e.g., submersion in water). Thus, the benefits of the Standard No. 217 rulemaking are potentially broader than those that might have resulted from a Standard No. 302 rulemaking since the latter standard addresses only those emergencies involving fire.

NHTSA agrees with the comments of Blue Bird, TAM-USA, Nebraska, Maryland, and NSTA that the agency's improvement of the emergency exit capacity requirements in Standard No. 217 better addresses the risks associated with post-crash fires than upgrading the flammability resistance requirements in Standard No. 302 would. Accordingly, given that the agency's upgrade of Standard No. 217 has reduced the already minimal risk posed by school bus fires, the agency believes that upgrading Standard No. 302 is not warranted.

The agency also notes that the NTSB has accepted NHTSA's upgrade of Standard No. 217 as an acceptable alternative to upgrading Standard No. 302. In a December 17, 1998 letter to NHTSA's Administrator, the Chairman of the NTSB stated:

Safety Recommendation H-89-4 was issued to NHTSA as a result of the Safety Board's investigation of the truck and bus collision near Carrollton, Kentucky on May 14, 1988.

Safety Recommendation H-89-4 asked NHTSA to incorporate in FMVSS 302 the recommendations of the National Institute of Standards and Technology concerning the new material acceptance criteria to reduce the rate of fire spread in all buses.

The Safety Board commends NHTSA for changing the emergency exit requirements so that school buses are required to have emergency exits. * * * As a result of NHTSA's efforts to upgrade the emergency exit requirements for school buses, thus reducing the need to upgrade the flammability requirements for school bus seats, Safety Recommendation H-89-4 has been classified "Closed " Acceptable Alternate Action."¹⁰

C. Carrollton Bus Did Not Meet the Then Current Federal Standards

The agency also notes that the bus involved in the Carrollton fire did not meet the then current Federal motor vehicle safety standards. That bus was

built before April 1, 1977, prior to the effective date of the final rule improving Standard No. 217's emergency exit capacity requirements and Standard No. 301's fuel system integrity requirements.¹¹ As a result, the Carrollton bus lacked safety features, such as fuel tank guards and improved access to emergency exits, required on large school buses that were built after 1977.

If the Carrollton bus had been built after 1977, and thus had been equipped with a fuel tank guard, the post-crash fire might never have occurred. According to the NTSB report, a puncturing of the bus' fuel tank caused the fire.¹²

Finally, the agency agrees with the comments of Thomas Built, Lichter Rubber, and Blue Bird that even if the Carrollton bus had complied with a hypothetical upgraded Standard No. 302, the increased flammability resistance might not have increased the survivability of a Carrollton-type crash. As noted above, the Carrollton crash was extremely severe, with a combined impact speed exceeding 100 miles per hour, and the fire that ensued was fuel-fed and explosive in nature.

D. Significant Costs of Upgrading Standard No. 302

While NHTSA believes that the weighing of regulatory costs and benefits should not be the only basis for a decision, and while the costs of improving flammability resistance are not definitive since performance levels and compliance test procedures were not specifically defined in the agency's earlier notices, these costs would have been substantial and disproportionate to the minimal benefits. The commenters' estimated costs ranged from \$275 to equip a 66-passenger bus with only fire retardant foam cushioning, to \$2,000 to equip a bus with fire retardant foam cushions and fire block upholstery. The agency's own range of estimates is from \$300 for fire retardant foam to \$850 for fire block upholstery.

Based on its estimates, the agency believes that the costs of upgrading Standard No. 302 could exceed the costs associated with other school bus-related rulemakings. For example, the agency estimated that the costs of upgrading

Standard No. 217's emergency exit requirements were \$557 per bus. Accordingly, NHTSA concludes that the low level of risk posed by school bus fires, which was even further reduced by the agency's upgrade of Standard No. 217, does not justify the significant additional costs that would result from upgrading Standard No. 302's flammability resistance requirements.

The agency notes that an upgrade of Standard No. 302 would increase the costs of school buses, forcing States and local school districts to spend more funds. The agency believes that these funds would be better spent on other school bus safety programs and devices that could save more lives and reduce more injuries, such as purchasing school buses complying with the upgraded emergency exit requirements or retrofitting school buses with stop signal arms and improved mirror systems.

E. Test Protocol

Finally, the agency does not believe it could propose a test protocol and criteria regarding conditions vital for survivability in a fire without first conducting further research evaluating the flammability of school bus interiors during high intensity fires. Similarly, additional research would be necessary to develop a protocol for toxicity tests if it were determined that toxicity is an important component of upgrading flammability. While the absence of an existing test protocol would not, by itself, justify terminating this rulemaking, NHTSA notes that the additional costs and time involved in developing such a protocol contributed to the agency's decision to terminate this rulemaking.

IV. Conclusion

For the reasons set forth above, NHTSA has decided to terminate this rulemaking action.

Although NHTSA has decided not to upgrade Standard No. 302, the agency notes that States and local school districts may purchase school buses with interiors that exceed the minimum Federal requirements. At the 11th National Conference on School Transportation in May 1990, the State delegates voted to recommend a large-scale test procedure for measuring flammability resistance with performance levels exceeding those required by Standard No. 302. The Conference's recommendations were reaffirmed at the 12th National Conference, which was held in May 1995, and the 13th National Conference, which was held in May 2000. While the 11th National Conference's

¹⁰ A copy of this letter has been placed in the docket.

¹¹ Standard No. 301, "Fuel System Integrity," specifies fuel spillage limitations after each of several crash tests. The purpose of the standard is to reduce the probability of injuries and fatalities in post-crash fires. School buses were not required to comply with Standard No. 301 until April 1, 1977. See 41 FR 36026, August 26, 1976.

¹² Highway Accident Report—Pickup Truck/Church Activity Bus Head-on Collision and Fire Near Carrollton, Kentucky, May 14, 1988, Report No. NTSB/HAR/89/01 (March 28, 1989).