



National Transportation Safety Board

Washington, D. C. 20594

Safety Recommendation

Date: October 28, 1992

In Reply Refer To: H-92-87 and -88

Honorable Thomas D. Larson
Administrator
Federal Highway Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

About 9:10 a.m. on December 11, 1990, a tractor-semitrailer in the southbound lanes of I-75 near Calhoun, Tennessee, struck the rear of another tractor-semitrailer that had slowed because of fog. The uninjured truckdrivers exited their vehicles and attempted to check for damage. After the initial collision, an automobile struck the rear of the second truck and was in turn struck in the rear by another tractor-semitrailer. Fire ensued and consumed two trucks and the automobile. Meanwhile, in the northbound lanes of I-75, an automobile struck the rear of another automobile that had slowed because of fog. Then, a pickup truck and two other automobiles became involved in the chain-reaction rear end collision. No fatalities, injuries, or fires occurred. Subsequently, 99 vehicles in the northbound and southbound lanes were involved in multiple-vehicle chain-reaction collisions that killed 12 people and injured 42 others.¹

In early 1992, the Federal Highway Administration (FHWA) funded the National Research Council's National Cooperative Highway Research Program (NCHRP) Project 20-5, Topic 23-12, "Reduced Visibility on the Highway." The purpose of the project is to inform the States and local agencies about fog and other limited-visibility countermeasures that can be used on problem roads.

Although the FHWA has funded NCHRP Project 20-5, Topic 23-12, the FHWA has not designated fog or other limited-visibility conditions for priority consideration in its Research and Technology (R&T) Program. That program is a 5-year plan updated annually to address critical national highway transportation needs; it typically results in considerable benefit to State and local transportation officials. While catastrophic limited-visibility accidents are relatively infrequent, the potential for loss of life and property damage exists when they do occur. The NCHRP

¹For more detailed information, read Highway Accident Report--*Multiple-Vehicle Collisions and Fire during Limited Visibility (Fog) on Interstate 75 near Calhoun, Tennessee, on December 11, 1990* (NTSB/HAR-92/02).

project will provide State highway officials with valuable information about limited-visibility countermeasures but will not necessarily influence the States to develop comprehensive limited-visibility countermeasure programs. The National Transportation Safety Board concludes that if the FHWA were to promote the latest developments in fog and other limited-visibility countermeasures through the R&T Program, the States would participate and the number and severity of limited-visibility accidents could be reduced. Therefore, the Safety Board believes that following the completion of NCHRP Project 20-5, Topic 23-12, the FHWA should ensure the continued development of effective fog and other limited-visibility countermeasures and make information about them available to States on a timely basis.

According to the testimony at the Safety Board special fog hearing, only a fraction of U.S. highways have limited-visibility-prone areas that require strict traffic control. Nevertheless, drivers should be familiar with traffic control devices on roads subject to limited visibility and strict traffic control. From the investigation of other limited-visibility accidents and the special fog hearing testimony, the Safety Board has learned that many States have implemented countermeasures for recurring limited-visibility conditions. Those countermeasures vary, and the disparity among States could cause driver confusion and result in nonuniform driver response. Since preventing limited-visibility accidents involving multiple-vehicle collisions requires uniform driver response, countermeasures should be similar nationwide to minimize driver confusion.

In reviewing driver license manuals from States in which it had recently investigated limited-visibility-related accidents, the Safety Board discovered inconsistencies in guidance for driving in fog and other limited-visibility conditions. The Safety Board believes that uniform specific guidance for driving during fog and limited-visibility conditions should be developed and incorporated in driver license manuals and tests. The Safety Board also believes that the National Highway Traffic Safety Administration (NHTSA), the FHWA, the American Association of Motor Vehicle Administrators (AAMVA), the American Automobile Association, and the American Driver and Traffic Safety Education Association should cooperate in reviewing and updating driver license, educational, and remedial training materials to ensure that guidance for driving during limited-visibility conditions is uniform and complete; that NHTSA and the AAMVA should develop model test questions for licensing examinations on driving during limited-visibility conditions; and that the AAMVA should develop inserts concerning countermeasures that motorists should consider when driving during fog and other limited-visibility conditions and advise its members to enclose such inserts with driver license renewals, motor vehicle registration renewals, and similar mailings.

Therefore, the National Transportation Safety Board recommends that the Federal Highway Administration:

Following completion of the National Cooperative Highway Research Program Project 20-5, Topic 23-12, "Reduced Visibility on the Highway," ensure the continued development of effective fog and other limited-visibility countermeasures and make information about these countermeasures available to States on a timely basis. (Class II, Priority Action) (H-92-87)

In cooperation with the National Highway Traffic Safety Administration, the American Association of Motor Vehicle Administrators, the American Automobile Association, and the American Driver and Traffic Safety Education Association, review and update driver license, educational, and remedial training materials to ensure that guidance for driving during limited-visibility conditions is uniform and complete and is included in commercial driver license materials. (Class II, Priority Action) (H-92-88)

Also, the Safety Board issued Safety Recommendations H-92-86 to the U.S. Department of Transportation; H-92-89 and -90 to the National Highway Traffic Safety Administration; I-92-1 and -2 to the Research and Special Programs Administration; H-92-91 to the Tennessee Department of Transportation; H-92-92 to the Tennessee Highway Patrol; H-92-93 through -95 to the American Association of Motor Vehicle Administrators; I-92-3 to Hercules, Incorporated; I-92-4 to the Charleston Volunteer Fire Department; H-92-96 to the American Automobile Association; and H-92-97 to the American Driver and Traffic Safety Education Association.

VOGT, Chairman, COUGHLIN, Vice Chairman, and LAUBER, HART, and HAMMERSCHMIDT, Members, concurred in these recommendations.



By: Carl W. Vogt
Chairman