



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

H-547B

Date: April 4, 1990

In reply refer to: H-90-17 through -32

Honorable Thomas D. Larson
Administrator
Federal Highway Administration
Washington, D.C. 20590

For many years, the National Transportation Safety Board has documented the major role played by alcohol and other drugs in causing accidents throughout the U.S. transportation system. The Safety Board has recently completed a safety study that focuses on such abuse and other human performance issues in accidents involving heavy trucks. A copy of the report, "Fatigue, Alcohol, Other Drugs, and Medical Factors in Fatal-to-the-Driver Heavy Truck Crashes (Volume 1)," is enclosed. A companion report, Volume 2, contains the case summaries of all of the truck accidents in the study.

The report discusses, in detail, the relevant safety issues and forms the basis for the recommendations issued by the Safety Board.

For a 1 year period, October 1, 1987 through September 30, 1988, the Safety Board investigated every accident in eight States in which a driver of a heavy truck was fatally injured. One hundred and eighty two accident investigations involving 186 heavy trucks were conducted in California, Colorado, Georgia, Maryland, New Jersey, North Carolina, Tennessee and Wisconsin.

From NTSB toxicological tests, the Safety Board found that 33 percent of the fatally injured drivers tested positive for alcohol and other drugs of abuse. The most prevalent drugs found were marijuana and alcohol (13 percent each), followed by cocaine (9 percent), methamphetamine/amphetamines (7 percent), other stimulants (8 percent), and codeine and phencyclidine (PCP) (less than 1 percent each). Stimulants are the most frequently identified drug class among fatally injured truck drivers.

Fatigue and fatigue-drug interactions were involved in more fatalities in this study than alcohol and other drugs of abuse alone.

In addition, the study found that for the fatally injured drivers:

- o The most frequently cited accident probable cause was fatigue (57 drivers or 31 percent) followed by alcohol and other drug use impairment (53 drivers or 29 percent);

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- o Of the 57 drivers who were fatigued, 19 were also impaired by alcohol and/or other drugs;
- o There is a strong association between violation of the Federal hours of service regulations and drug usage;
- o Drivers with at least one suspended or revoked license are more likely than other fatally injured drivers to have used drugs of abuse;
- o There is a significant relationship between a driver's prior alcohol and/or other drug offenses and a positive test for drugs of abuse in these accidents. This points up the need for thorough background checks and pre-employment drug tests;
- o There is a significant relationship between drug positive test results among professional drivers and a shipment deadline for the load being carried;
- o There is a significant relationship between drug positive test results and the type of trucking service provided, truckload (TL) vs. less-than-truckload (LTL). Nearly 42 percent of fatally injured TL carrier drivers tested positive compared with 14 percent of LTL carrier drivers;
- o There is a significant relationship between drug positive test results and the day of the week. Saturday, Sunday, and Monday are the days with the highest percentages of drug positive tests;
- o While time of day and drug positive tests are not significantly related, 70 percent of the drug positive tests occurred in the following times: 9:00-9:59 am; 1:00-3:59 pm; and 6:00 pm-1:59 am. 1988 FARS data indicates that 48 percent of truck fatal accidents occurred during these times;
- o A disproportionately high percentage of drivers who used drugs are single, separated or divorced;
- o The driver's medical condition caused or contributed to 10 percent of the accidents. Over 90 percent of medical condition related accidents involved some form of cardiac incident. This calls into question the effectiveness of the Federal program to assure the proper medical qualification of commercial vehicle drivers;
- o Older drivers are less likely to have tested positive for drugs, but are more likely to have had an incapacitating medical incident;
- o Occupant protection issues are the most frequently identified non-causal factors involved in a heavy truck fatal accident (68 of 185); and

- o In 115 of the 185 accident involved trucks (62 percent), some management deficiency in oversight of the driver or the proper condition of the vehicle was identified. Deficiencies in oversight of both the driver and the vehicle were identified in 32 of 185 (18 percent) accidents.

The study also reviews: the regulations and legislation governing commercial truck operations; previous relevant research in the field of alcohol and other drug abuse; and the highway accident databases now in existence. The study notes the limitations of those databases as a means with which to assess the scope of the alcohol and other drug abuse problem in heavy truck accidents.

The Safety Board noted that there is also the need for a standardized national set of procedures for conducting alcohol and other drug tests when a fatal heavy truck accident takes place.

As a result of this safety study, the National Transportation Safety Board recommends that the Federal Highway Administration:

Require pre-employment alcohol and other drug tests on all drivers of commercial trucks with a gross vehicle weight rating of 10,000 pounds and above as a condition of employment. (Class II, Priority Action) (H-90-17)

Amend 49 CFR 391.21 "Application for employment" and 391.23 Investigations and inquiries to include a complete review of alcohol and other drug abuse treatment history prior to employment as a commercial truck driver. (Class II, Priority Action) (H-90-18)

Require commercial truck driver applicants with a prior history of drug and/or alcohol abuse to complete a certified treatment program and obtain a physician's evaluation of substance abuse and dependency. (Class II, Priority Action) (H-90-19)

Require close supervision, including frequent, unannounced drug testing, for an appropriate period, of commercial truck drivers with an identified alcohol or other drug abuse problem. Such testing should be sufficiently frequent to create the likelihood of detection if the person uses drugs of abuse. (Class II, Priority Action) (H-90-20)

Disseminate safety information to national, State, and local police agencies, public service and safety agencies, professional truck driver groups and individual truck drivers, regarding: the effects of fatigue, alcohol and other drug use; the interaction of alcohol, drugs and fatigue; the prevalence of drug and alcohol abuse among professional commercial vehicle operators; and, methods of minimizing conditions which lead to commercial vehicle operators driving while fatigued. (Class II, Priority Action) (H-90-21)

Establish a demonstration project(s) to deter the use of alcohol and other drugs by drivers of medium and heavy trucks that includes alcohol and other drug testing at special roadside sobriety checkpoints, truck inspection lanes, and truck weigh stations. (Class II, Priority Action) (H-90-22)

Establish and fund a program to train instructors to provide drug recognition expert training to Federal agency inspectors/investigators, police, and other public service personnel with commercial truck and truck driver oversight responsibilities. (Class II, Priority Action) (H-90-23)

Amend 49 CFR 391.43 to require more extensive and frequent state of the art cardiac screening tests and examinations of older commercial truck drivers (age 40 and above) and for all commercial drivers with cardiac conditions. Commercial drivers with a cardiac history or condition should be disqualified until cleared by a competent medical authority. (Class II, Priority Action) (H-90-24)

Develop a clear set of medical standards for cardiac risk assessment and require physicians to use them in qualifying older commercial truck drivers and for commercial drivers with cardiac conditions. Medical certification should include medical state of the art cardiac risk factors. (Class II, Priority Action) (H-90-25)

Provide for criminal penalties for physicians who deliberately qualify commercial truck drivers with serious medical conditions in spite of contradictory medical evidence and for physicians, commercial drivers, and others who falsify the medical examiner's certificate. (Class II, Priority Action) (H-90-26)

Improve the medical examination form in 49 CFR 391.43 to ensure that the examining physician is aware of truck operation risk factors and of the physical and other stress producing requirements of commercial truck operation. Provide for a means for physicians to acknowledge that they understand the rigors of commercial truck operation and that the driver being examined is qualified for such commercial truck operations. The physician should also certify that he understands the penalties for deliberate and/or false statements on the medical certificate and for medical certificate falsification. (Class II, Priority Action) (H-90-27)

Require automated/tamper-proof on-board recording devices such as tachographs or computerized logs to identify commercial truck drivers who exceed hours of service regulations. (Class II, Priority Action) (H-90-28)

As part of the FHWA on-going study of fatigue and loss of alertness among commercial vehicle operators, investigate the interactions of fatigue and drug usage. (Class II, Priority Action) (H-90-29)

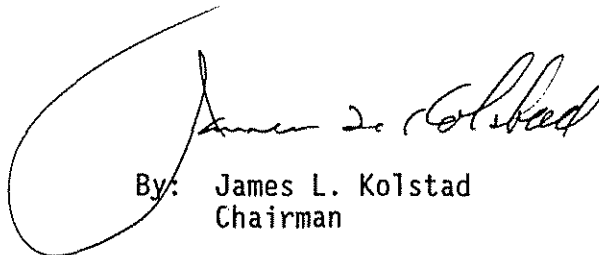
Revise 49 CFR Parts 391 and 395 to establish driver hours of service violations, logbook irregularities, or the presence of multiple logbooks as a reasonable cause requiring a drug test of the driver. Amend the regulations and provide notice to drivers of these revised regulations. (Class II, Priority Action) (H-90-30)

Revise 49 CFR Parts 391 and 392 to establish violation of the commercial vehicle operation alcohol offense (49 CFR 392.4, 392.5) as a reasonable cause requiring a drug test of the driver. Amend the regulations and provide notice to drivers of these revised regulations. (Class II, Priority Action) (H-90-31)

Amend 49 CFR Part 392 and 395 to prohibit employers, shippers, receivers, brokers, or drivers from accepting and scheduling a shipment which would require that the driver exceed the hours of service regulations in order to meet the delivery deadline (similar to current regulations regarding schedules which would require the driver to exceed the speed limit [49 CFR 392.6]). In conjunction with the Interstate Commerce Commission, provide for operating certificate and financial penalties appropriate to the offense. (Class II, Priority Action) (H-90-32)

Also as a result of this safety study, recommendations have been issued to the National Highway Traffic Safety Administration, the U.S. Department of Transportation, the Department of Health and Human Services, Governors of the States, the National Governors' Association, trucking industry trade associations, the International Brotherhood of Teamsters, law enforcement associations, the National Home Study Council, the National Association of Trade and Technical Schools, and the Professional Truck Driver Institute of America.

KOLSTAD, Chairman, BURNETT, LAUBER, and DICKINSON, Members, concurred in these recommendations.



By: James L. Kolstad
Chairman