

the time spent on-duty may be a more important factor in driver loss of alertness [citing Harris and Mackie, *A Study of the Relationships Among Fatigue, HOS, and Safety of Operations of Truck and Bus Drivers*, 1972].” AHAS argued that “there has been no research since this Congressional report, including research completed for the OMCS over the past decade, which has refuted the accuracy of these observations or of the research on which they are based.”

AHAS also extensively quoted a **Federal Register** notice from 1980 stating:

The [rationale] for the hours of service regulations is justified by the concept that the longer a person drives, the more [fatigued] that person becomes and consequently, the more prone to becoming involved in accidents.

45 FR 82284, at 82286.

Fatigue, however it is defined, appears to be the chief factor limiting a person's output. Various studies have shown that when the working day is lengthened, productivity goes down, when the number of hours worked is reduced, performance increases.

The influence of fatigue in accident causation has been demonstrated and where there has been a reduction in hours worked, there has been a reduction in accidents. There is some evidence that 8 hours of work a day, where the work is fairly demanding, is the maximum that should be permitted for highest productivity and lowest accident rate.

45 FR 82284, at 82288.

AHAS also argued that FMCSA's predecessor agency in 1987 endorsed findings that increased consecutive driving hours and consecutive days of driving both directly contribute to driver errors and crashes. See 52 FR 45215. AHAS argued that FHWA made assertions to the same effect in the November 29–30, 1988, Symposium on Truck and Bus Driver Fatigue.

AHAS also argued that “[n]one of the research findings showing the increased safety and productivity of fewer hours worked and driven than the maximum 10 hours permitted under the current regulation are cited or discussed anywhere in the instant proposed rule.”

AHAS continued that “no credible studies in the intervening years have countermanded the accuracy and wisdom of these observations. Indeed, scores of new studies have amply and repeatedly corroborated the FHWA's policy statements over the past 20 years about the dangers of driving and working longer hours.”

Finally, AHAS argued that “the FMCSA has categorically altered its position in this rulemaking on the merits of driving and working longer

hours without demonstrating why and how these prior conclusions are no longer valid. AHAS does not believe the agency has countered these documented policy views with any new facts and information which moot their application to the revision of the current HOS standards to ensure that drivers work and drive fewer hours to ensure a reduction in both the relative and absolute risks of truck crashes. Instead, the agency, against all the evidence of record, including their own policy statements over the years, has offered amendments to the current regulation which demonstrably will promote truck and bus drivers to drive longer consecutive hours at a greatly increased risk of crashes due to an increased prevalence of fatigue among commercial operators.”

AHAS believes that nighttime driving is less safe than daytime driving because of the circadian effects on the driver. It rejects, however, as speculative and unsupported by any evidence, the potential that displacement of nighttime operations to daytime could create additional safety problems due to increased congestion.

CRASH's principal objection is that the proposal increases by two hours the amount of time a driver can drive in one day. CRASH cited studies showing that crash risk nearly doubles after 8 hours and doubles again after the 9th hour.

PATT joined AHAS and CRASH in strongly opposing any increase in the 10-hour driving limitation because of research that shows the risk of crashes increases after 8 hours and even more significantly after 9 to 10 hours. PATT recommended limiting driving to 10 hours out of 12 hours of allowable duty time each 24 hours, or to put it another way, no more than 50 hours driving in 60 duty hours per week. On these issues, the safety advocates were in harmony with the position of the IBT.

The IIHS commented that there are “gold standard” studies relating crashes of truck drivers to driving hours showing that performance degrades starting after the 5th hour, but the risk dramatically increases after the 10th hour.

NIOSH recommended limiting driving to 10 hours within a 24-hour work/rest cycle of 12 hours on duty and 12 hours off duty. NIOSH also said the FMCSA should consider allowing up to 12 hours of driving per day on rare occasions as required by emergencies or other unusual circumstances where continued driving would be safer than stopping.

#### FMCSA Response

Just as industry was inclined to interpret the science as allowing greater

productivity without facing greater risk, the safety advocates cite the science as requiring the agency to go further to restrict driving time.

Although AHAS argued that there have been no credible studies since 1981 and 1990 countermanding the agency's previous position, FMCSA believes recent studies have provided new information requiring the agency to reevaluate its former policy statements.

America's transportation system has changed significantly since the late 1930's. Long-haul truckers in the 1930's could average only 25 miles per hour (mph)—the top speed was 40 mph—and the best daily run was about 250 miles (11 M.C.C. 203). These truckers used drafty, noisy, and underpowered trucks to labor up long hills and other rough, narrow, and poorly-marked winding roads. The construction of the Interstate Highway System has contributed to significantly higher traffic speeds and volumes. Trucking, once a relatively minor adjunct to the railroads, has become the dominant form of transportation for most commodities. Much of the nation's truck traffic moves on the Interstates and other high-speed roads, sometimes for very long distances using modern, heated/air-conditioned, air-suspension, sleeper-berth, cruise-control equipped tractors for drivers' comfort and safety.

The high volume and speed of traffic on the Interstates and many other roads require a higher level of driver alertness, for the sheer mass of a truck can make it deadly when accidents occur. Of course, trucks also operate in local or regional environments, often in heavy traffic, and drivers are required to perform an ever-wider range of duties. The results of scientific research into fatigue causation, sleep, circadian rhythms, night work, and other matters were unavailable decades ago when the HOS rules were formulated. The FMCSA believes there can be little doubt that fatigue directly attributable to the exertion required to operate the modern CMV is less of a factor now.

By limiting daily duty hours, the NPRM would have imposed a more regular work/rest cycle, assuming that very few, if any, drivers would drive their entire on-duty period. This is consistent with testimony from carriers and drivers alike about customary practices. The AHAS pointed out, however, that the degraded performance in the eleventh and twelfth hours on duty should not, at least regularly, be spent behind the wheel. The AHAS position does create potential issues with operational practicality. The AHAS insisted science would require the agency to include both a reduction in a