

the greatest extent practicable on the degree to which driver performance is adversely affected by these interruptions during the rest period.

### Daily Work/Rest Cycle

#### *General Concept*

The circadian cycle of a 24-hour workday was presented in the NPRM's definition of workday as "any fixed period of 24 consecutive hours," and in the number of hours required to be off-duty combined with allowable on-duty periods. The comments reflected a fairly general agreement across the board that the rules should build on the foundation of a 24-hour day and that the current allowance for 8 consecutive hours off duty was insufficient to assure that drivers had the opportunity to get 7–8 hours of sleep. For example, nearly all of the responding motor carriers and motor carrier associations mentioning this issue agreed that the science clearly supports this change. The safety advocacy groups and the scientific responders enthusiastically supported the proposal to revert to a 24-hour work/rest cycle. The issue of how these on-duty and off-duty periods apply to the proposed five types of operations is reserved for another section. This is not to say, however, that there was a total absence of dissent. As we will see with many of the proposed restrictions, there were some problems in the details, and that the problem usually cited was a lack of flexibility.

The motorcoach industry had little interest in this issue, primarily because it has already absorbed the principle into operating practices. Its basic position is that the industry has adjusted well to the existing rules.

#### *ATA and DLTCA Recommendations*

The DLTCA filed a petition on November 29, 2000, on behalf of itself and nine other trade associations, including the ATA, which, among other things, presented *The Trucking Industry's Hours-of-Service Proposal*. The document was described as the product of a 2-year effort by the petitioners' motor carrier members, who had it reviewed by Drs. Mark R. Rosekind and David F. Dinges, noted experts in sleep science, to ensure consistency with the latest safety research. Referring to a 24-hour rest/work schedule, the petitioners said:

We now know, based on research regarding the circadian rhythm, our bodies function on a 24-hour cycle. The rules should mirror this biological rhythm so that time on and off duty equals 24 hours. The current rules do not adhere to this pattern since they require 8 hours off duty and allow 15 hours on duty.

We recommend a 14-hour on-duty period and 10-hour off-duty period.

As discussed above, the ATA had earlier submitted recommendations to the DOT in December 1999 while the draft NPRM was being reviewed at OMB before publication. The ATA championed the concept of a 24-hour work/rest cycle but did not describe their "14 duty hours" as a period limited to 14 consecutive hours.

Regarding the issue of the 10-hour off-duty and 14-hour on-duty components of the 24-hour cycle, the ATA said in its recommendations:

This is a decrease in allowable work hours from the current rules. When combined with the increased amount of off-duty time (from 8 to 10 hours), a 14-hour on-duty period promotes driver scheduling which mirrors more closely the body's 24-hour clock.

The 1999 ATA recommendations included a daily "flex-time" option, which was not mentioned in the November 2000 DLTCA multi-association petition. Flex-time would allow drivers to add up to 2 hours to the daily on-duty time no more than twice in any 7-day period, provided at least 48 hours separated the two extended on-duty periods and an amount of extra off-duty time equal to the "extended" time taken within 24 hours. The ATA said it found the "flex-time" provision necessary to accommodate "certain segments of industry [which] find themselves in a position where a 14-hour workday places the drivers in a position, on an irregular basis, of not being able to complete their assigned tasks." In its docket submittal of December 15, 2000, the ATA, referring to the 24-hour work/rest cycle, merely said: "Work shifts should not be required to begin at the same time each day." It also included the daily flex-time provision, and suggested regulatory language to implement this option.

The ATA cited no scientific source for the following three elements of its proposals:

- (1) Extending the workweek to 70 hours in 7 days, all of which could be, but probably would not be, driving time;
- (2) An averaging provision allowing drivers to work 140 hours in 14 days by averaging one 84-hour workweek with one 56-hour workweek with a minimum of 34 hours off in between; and
- (3) Split off-duty time for sleeper berth drivers, and a limited allowance for combining sleeper-berth time with other off-duty time.

At the second FMCSA "roundtable" discussion on September 28, 2000, the DLTCA representative hypothesized that the ATA recommended eliminating the distinction between driving and on-

duty not driving time, "because as a practical matter, no driver is going to be beyond 12 \* \* \* we are never going to be beyond 12 \* \* \* because we have 3 to 4 hours loading time. We have pre-trip inspections. We have all these other activities built in."

#### *Industry Comments*

The National Tank Truck Carriers (NTTC) supported the 24-hour clock as the basis for work/rest cycles. However, it refuted any assumptions that the tank truck industry has operational predictability and asserted that the rigidity of the rules unnecessarily restricted driver flexibility.

#### *Private Carriers of Freight*

The NPTC recommended adopting a 24-hour work/rest cycle. The NPTC believes drivers' HOS regulations should be based on a 24-hour clock, reflecting a significant body of science that has determined that human beings have a natural circadian rhythm.

The International Bakers Association (IBA) favored efforts to promote a 24-hour work/rest cycle without requiring work to start at the same time every day.

#### *Truckload Carriers*

Large truckload carriers, such as Schneider National, J.B. Hunt, and Landstar, several of which participated in the formulation of industry's counter-proposal, generally favored a 24-hour work/rest cycle. The smaller truckload carriers were a little more reserved in their support for the 24-hour work/rest cycle, and that was primarily due to concern about the lack of flexibility in the proposal.

The NASTC explained that its members have to depend upon the spot market to obtain back-hauls to maximize earnings. The unpredictable nature of such commerce may make it difficult to adhere to a strict 24-hour workday. Several of its members opposed the rigidity of a "fixed period of 24 consecutive hours."

#### *LTL Carriers*

The reaction of the LTL carriers was also generally positive on the issue of the 24-hour work/rest cycle. This may be because the nature of LTL operations is more closely in line with a 24-hour day. Most LTL carriers reported that runs are generally scheduled so they can be completed within 12 hours with no more than 10 hours driving. They need the flexibility of the extra two hours, however, to deal with exigencies. Yellow Freight System (Yellow), one of the largest LTL carriers and a member of Motor Freight Carriers Association (MFCA), recommended that the agency