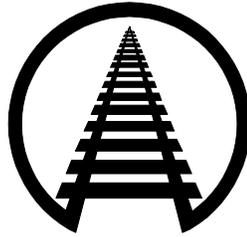


STATEMENT OF
EDWARD R. HAMBERGER
PRESIDENT & CHIEF EXECUTIVE OFFICER
ASSOCIATION OF AMERICAN RAILROADS



BEFORE THE
U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEE ON RAILROADS, PIPELINES, AND
HAZARDOUS MATERIALS

HEARING ON FATIGUE IN THE RAIL INDUSTRY

FEBRUARY 13, 2007

Association of American Railroads
50 F Street NW
Washington, DC 20001
202-639-2100

Introduction

On behalf of the members of the Association of American Railroads (AAR), thank you for the opportunity to discuss issues surrounding rail safety, the Hours of Service Act, and fatigue in the rail industry. AAR members account for the vast majority of freight railroad mileage, employees, and traffic in Canada, Mexico, and the United States.

Railroads want properly rested crews: it is not in a railroad's best interest to have employees who are too tired to perform their duties properly. That's why railroads have long been working diligently to gain a better understanding of fatigue-related issues and find innovative, effective solutions to fatigue-related problems. In the interest of managing fatigue-related railroad issues, railroads have adopted a set of principles (listed later in this testimony) to guide such efforts.

As explained in more detail below, although railroads have made substantial progress in combating fatigue in the rail workplace, it is clear that factors that can result in fatigue are multiple, complex, and frequently intertwined. Consequently, efforts to combat fatigue should be based on sound scientific research — and not on anecdotes or isolated events. There is no single, easy solution to fatigue-related problems.

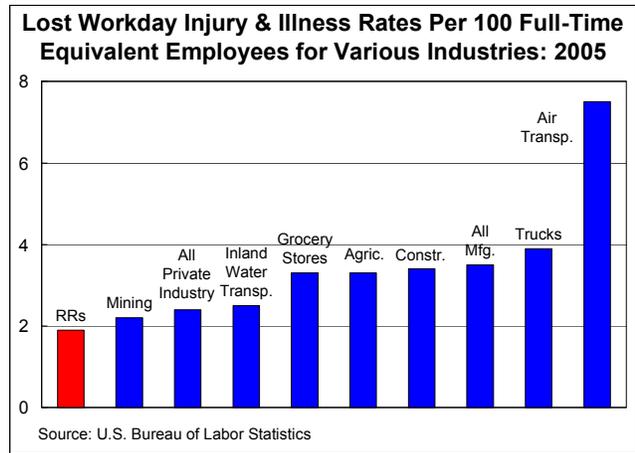
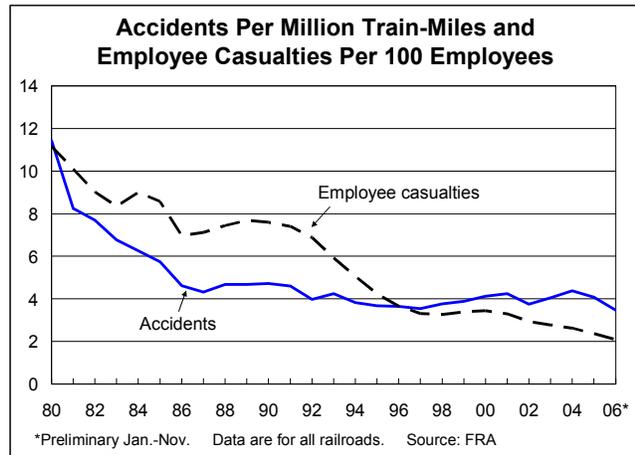
That said, railroads agree that a careful reassessment of the Hours of Service Act (HSA) — the statute that governs the on-duty time of rail employees involved in operating trains — is appropriate in addressing fatigue. Currently, under the HSA, train crews must go off duty after 12 consecutive hours on the job, and then must have at least 10 consecutive hours off duty. If crews go off duty after less than 12 hours on the job, they must have at least 8 consecutive hours off duty. Railroads are willing to provide crews with more off-duty time than these statutory minimums and are willing to require employees to take time off for rest opportunities.

Combating fatigue is a shared responsibility of railroads and individual employees. Railroads are willing to work cooperatively with rail labor and with policymakers to find ways to combat fatigue, while ensuring that U.S. freight railroads continue to provide the cost-effective and efficient freight rail service that is so important to our economic health and standard of living.

Overview of Rail Safety

The overall rail industry safety record is excellent, reflecting the extraordinary importance railroads place on safety. As a Federal Railroad Administration (FRA) official noted in Congressional testimony last week, “The railroads have an outstanding record in moving all goods safely.” From 1980-2005, railroads reduced their overall train accident rate by 64 percent and their rate of employee casualties by 79 percent.

And rail safety is continuing to improve. Data for 2006 through



November show continued improvements in the three major rail safety measures, with record lows for the train accident rate, the employee casualty rate, and the grade crossing incident rate. Railroads have lower employee injury rates than other modes of transportation and most other major industry groups, including agriculture, construction, manufacturing, and private

industry as a whole. Available data also indicate that U.S. railroads have employee injury rates well below those of most major foreign railroads.

Railroads are also far safer than trucks. Rail freight transportation incurs less than one-fifth the fatalities that intercity motor carriers do per billion ton-miles of freight moved.

Background on Rail Accidents Caused by Human Factors

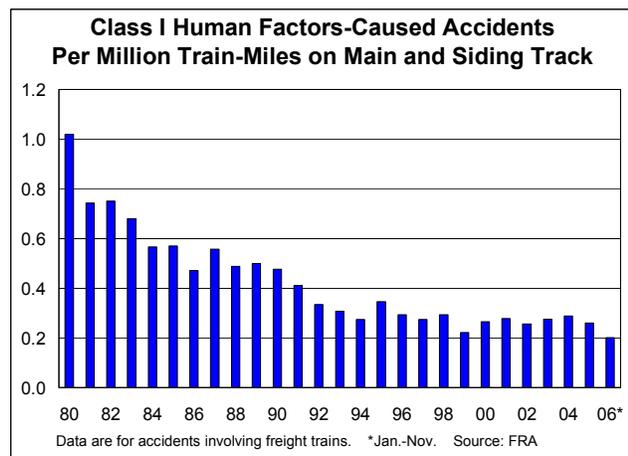
According to FRA data, human factors (*i.e.*, human errors) constitute the largest category of train accidents, accounting for 38 percent of all train accidents from 2001 to 2005.

Given the extent and complexity of rail operations — the U.S. freight railroad “factory floor” is outdoors and nearly 141,000 miles long — the potential for rail accidents always exists. And while railroads respect and applaud the professionalism and attention to safety that rail employees bring every day to their jobs, people may sometimes make mistakes.

Over the past decade, the rate of rail accidents caused by human factors has stayed relatively constant, and in 2005 was 53 percent lower than it was in 1980. In addition, many human factor-caused accidents are low-speed yard accidents, which incur substantially lower damage and casualties. The rate of human factors-caused accidents involving freight trains on main and siding track in 2006 through

November was 80 percent below its 1980 level and 58 percent below its level in 1990. Because of the more standardized work environment in yards and terminals, fatigue issues come into play most predominantly on mainline, long-distance

trains. However, safety data indicate that the human factors-related accident rate (which include accidents caused by fatigue) on main lines has greatly improved.



Nevertheless, railroads agree that they, rail labor, and the FRA must continue to try to reduce the frequency of accidents caused by human factors.

Background on the Hours of Service Act

As members of this committee know, the on-duty time of rail employees involved in operating, dispatching, and signaling trains is governed by statute — specifically, the Hours of Service Act (HSA), now codified as 49 U.S.C. 21101-21108.

Under the HSA, rail employees that operate trains (*i.e.*, conductors and engineers) must go off duty after 12 consecutive hours on the job, and then must have at least 10 consecutive hours off duty. If they go off duty after less than 12 hours on the job, they must have at least 8 consecutive hours off duty. On-duty time starts the minute the employee reports for duty and includes any work that involves engaging in the movement of a train and deadhead transportation to a duty assignment. Off-duty time starts when the employee is released from duty, generally at a designated terminal or place of lodging.

For dispatchers, a workday is limited to nine hours in a 24-hour period where two shifts are used, or 12 hours over the same period when there is only one shift.

Finally, signal employees can work a maximum of 12 consecutive hours on duty, followed by at least 10 consecutive hours off duty.

Railroads must keep detailed records specifying when each covered employee is on duty or off duty. Violations of the HSA can result in fines of between \$500 and \$10,000 per violation, with each employee considered a separate violation.

To comply with the HSA and still operate as a highly-competitive 24-hours per day, 7-days per week industry, freight railroads try to schedule crew assignments with as much precision as possible. Unfortunately, the nature of rail operations makes precision extremely difficult to achieve.

Most people are familiar with passenger modes of transportation, and that familiarity at times slants our thinking about how freight railroads do and should operate. A single flight crew, for example, will typically fly a plane from, say, Los Angeles to Washington. Occasionally, weather or other problems might impact airline schedules, but by and large passenger airlines are able to offer predictable, regularly-scheduled service.

Generally speaking, freight railroads are quite different. Unlike airlines, freight railroads require multiple crew changes to move commodities across the country. Railroads must use multiple local and yard assignments to gather freight at the beginning of a trip, then use multiple crews to move it across the country, and then use more local crews to deliver the freight to its final destination.

Where appropriate and practicable, train scheduling is being implemented and can have positive impacts on fatigue. However, because of the nature of some rail systems, trains in many cases cannot run on a precise schedule.

There are numerous reasons for this. For example, railroads are a derived demand industry: they move traffic that is tendered to them, and the volume of traffic tendered is influenced by a huge variety of factors — *e.g.*, the state of the economy, customer operating and delivery cycles, conditions in specific industries, the time of year, and the time of day. These factors mean that the volume of rail traffic on the U.S. rail network on one day of the year can vary by tens of thousands of carloads and intermodal units compared to another day.

These variances are driven by myriad external market forces over which railroads have no control, such as the arrival (and severity) of summer weather (and increased demand for coal to fuel power plants); the size and timing of grain and other agricultural harvests; the approach of Christmas season when retailers are stocking their inventories; factory ramp-ups and temporary shutdowns; ocean vessel arrivals and departures; the status of export markets

for coal, grain, and other products; and even interest rates, which affect sales volumes of automobiles and home building materials, among many other things.

These variances mean that a different number of trains must be operated from one time period to the next, which in turn impacts the number of crews needed.

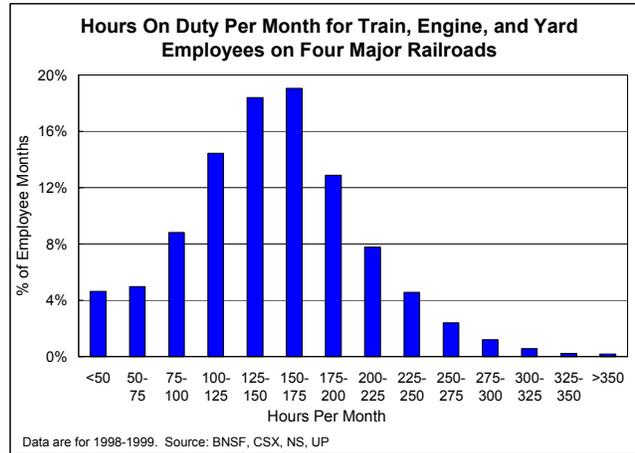
In addition to carload variances, weather conditions, track maintenance, accidents, track congestion, and dozens of other events or circumstances can delay a particular train's progress, thus impacting the time that other crews will be needed. For example, when a motor vehicle goes around crossing gates and is hit by a train, not only might that train be delayed for several hours, but all trains behind it and other trains approaching from the opposite direction might be delayed as well. Crews at the next terminal are unexpectedly delayed in terms of when they go to work.

Thus, there is considerable volatility in railroad crew needs on a daily, weekly, and monthly basis. Indeed, there is probably no other industry with scheduling volatility as pronounced as freight railroading.

In addition, the existing hours-of-service regime is embedded in many existing collective bargaining agreements, including provisions on crew calling and pay scales.

Crew calling is the procedure by which engineers and conductors are required to be available for duty and are called to report for duty. Railroads try to provide employees as much advance notification as is practical, but, again, the nature of rail operations and the fact that most rail operating employees bid into a seniority-based pool system from which they are drawn in a complex rotating order makes precise scheduling impossible to achieve. This pool system is an integral part of collective bargaining agreements between rail management and rail labor.

Some have pointed out that a rail employee could work 432 hours per month and still be in compliance with the HSA. Theoretically, that's true, but there is a huge difference between theory and practice, and in fact we know of no cases where this has occurred. As the



accompanying chart shows, the overwhelming majority of railroad train, engine, and yard employees are on duty each month for periods comparable to most other U.S. workers. Some 83 percent of these rail workers are on duty less than 200 hours per month and more than 95 percent are on duty less than 250 hours per month. Fewer than 1 percent of employees are on duty more than 300 hours per month.¹

Of course, on-duty time does not equate to time actually operating a train, which is typically much less. For example, under the statute and FRA interpretations, “on duty” time can include activities such as attending a safety briefing before or after leaving a train, being transported to trains, and making computer entries. Time spent on these activities is treated the same as time spent running a train.

Railroads believe that a recent study of crews operating in the busy western U.S. coal fields in 2004-2005 reveals what rail employees typically face in terms of hours worked. The study of more than 11,000 crew starts by 150 employees during a 10-month period found that the average time on duty was 9.5 hours with an average of 25 hours off duty between trips.

¹ The data referenced in this paragraph cover 1998-1999. Recent analysis reveals that the average hours worked per year for train and engine employees have increased only slightly between 1998-1999 and 2005. Thus, the relationships noted above are believed to be valid today.

Combating Fatigue in the Rail Industry

As noted at the beginning of this testimony, it is clearly not in the best interest of railroads to have employees who are too tired to perform their duties properly. That's why railroads have long partnered with their employees to gain a better understanding of fatigue-related issues and combat fatigue-related problems. However, because factors that can result in fatigue are multiple, complex, and frequently intertwined, there is no single solution.

Scientific research to date suggests that flexibility to tailor fatigue management efforts to address local circumstances is key to the success of these programs. Significant variations associated with local operations (*e.g.*, types of trains, traffic balance, and geography), local labor agreements, and other factors require customized measures. Consequently, a one-size-fits-all regulatory or legislative approach is unlikely to succeed as well as cooperative efforts tailored to individual railroads.

Railroads recognize that combating fatigue is a shared responsibility. Employers need to provide an environment that allows the employee to obtain necessary rest during off-duty hours, and employees must set aside time when off duty to obtain the rest they need.

Since 1992, the AAR, the Brotherhood of Locomotive Engineers, and the United Transportation Union have addressed fatigue through the Work/Rest Task Force. The Task Force members share information about fatigue countermeasures. Periodically, the Task Force publishes a compendium of railroad initiatives. A revised compendium has recently been completed.

Different railroads employ different fatigue countermeasures, or the same countermeasures in different ways, based on what they've found to be most effective. Not every countermeasure is appropriate for every railroad, or even for different parts of the same railroad, because the effectiveness of various fatigue countermeasures is critically dependent

on the circumstances unique to each railroad. A list of countermeasures that are used by one or more railroads includes:

- Increasing the *minimum number of hours of rest* at both home and away from home terminals.
- Implementing a *morning return* to work time if off work more than 72 hours.
- Evaluation of a system to *identify relative levels of fatigue* in different locations using a work schedule model.
- Evaluation and adoption of a sophisticated *fatigue modeling computer program* that allows users to vary shift lengths, duration of off-duty time, and the like to determine which set of variables is likely to induce the least amount of fatigue at a particular location. Employees and their labor representatives at several locations have been given a copy of the model and training in its use in order to test prospective countermeasures from the perspective of fatigue and lifestyle.
- Fatigue identification and avoidance *training information* for employees and families.
- Permitting *napping* by train crew members under limited circumstances (*e.g.*, when a train is expected to remain motionless for a minimum period of time)
- *Sleep disorder screening*. Recognizing that some employees with sleep disorders may be reluctant to come forward for treatment for fear of their livelihood, in 2005 railroads and labor produced and circulated a statement saying that a sleep disorder will be addressed no differently than any other medical condition that might affect job performance — namely, individual evaluation by medical professionals for diagnosis and treatment.
- *Improved standards* for lodging at away-from-home facilities that provide black out curtains, white noise, and increased soundproofing.
- Railroads have devised a number of systems, including web sites and automated telephone systems, to *improve communication* between crew callers and employees. Union Pacific, for example, has developed a customized notification process allowing employees to specify how (cell phone, text message, e-mail) they want to be notified. They can also specify “when” to be notified — *i.e.*, when the number of employees ahead of them drops to a level that the employee specifies.

Railroads and unions have agreed in some cases to additional scheduling tools where such tools are feasible and will provide for an improved opportunity for rest. They include:

- Enhanced emphasis on *returning crews home* rather than lodging them away from home. CN, for example, uses this practice for many of its road train

crews as a result of its scheduled turn around service and the hourly collective bargaining agreements it has in place.

- Providing more predictable *calling windows* and rest opportunities between shifts. For example, a significant number of Norfolk Southern crews know within a narrow window when their next assignment will begin.
- Providing for a *set number of days off* after being available for a given number of days. For example, at some 200 crew locations covering thousands of employees, BNSF has implemented a scheduling policy that provides three set days off after seven days of work. These provisions required local union agreements at the various locations and were implemented with union agreement and participation.
- Allowing employees to request an *extra rest period* when they report off duty.

Again, these various countermeasures may be appropriate and practical in some situations for some railroads, but not for others. Each railroad works carefully to craft particular fatigue countermeasures to match the particular circumstances it faces.

In addition, AAR member railroads offer fatigue education programs for employees and their families, including individualized coaching to assist employees in improving their sleep habits.

The importance of education in this area cannot be overstated, since the value of fatigue-related initiatives is highly dependent upon the actions of employees while off duty. Many employee actions while off duty (for example, working second jobs) can contribute to fatigue, and railroads have little control over these actions. The most important time frame that affects fatigue on the job are the hours prior to going on duty. Employees must make proper choices regarding how they utilize their off-duty time, and education of the entire family is important in encouraging sound decision making.

An educational web site designed solely for railroads and rail employees is under development by the Class I railroads in partnership with the American Short Line and Regional Railroad Association and the American Public Transportation Association. The

purpose of this tool is to provide general information to employees about alertness and to identify possible sleep disorders. The site will include a self-assessment tool and an explanatory letter about sleep disorders that employees can take to their physicians.

Another part of the web site will include existing educational programs (videos, pamphlets, etc.) that subscribers can exchange. An expert scientific panel has been formed to review content. The panel includes Dr. Greg Belenky, Director of the Sleep and Performance Research Center at Washington State University Spokane; Dr. Simon Folkard, Emeritus Professor, Department of Psychology, University of Wales Swansea; and Dr. Ann M. Williamson, Associate Professor and Deputy Director, NSW Injury Risk Management Research Center, University of New South Wales.

It is important to remember that there is no single solution to the issue of fatigue. It must be, and is being, attacked on multiple fronts. Railroads agree with the National Transportation Safety Board that it is a "...shared responsibility of the carrier to provide an employee the opportunity for adequate sleep and of the employee to acquire sleep sufficient to work at a safe level of alertness..."

What Should (and Should Not) Be Done

As detailed above, railroads are heavily involved in efforts to better understand and combat fatigue in the workplace, and have made many advances within the current framework of the HSA. They favor continued research on the subject and will continue to work with rail labor to find and implement new ways to combat fatigue.

Railroads agree that changes in the HSA might help reduce fatigue in the rail workplace. However, railroads urge extreme caution in amending the HSA. If not carefully thought out, new fatigue-related regulatory or statutory mandates may not achieve the goals they are designed to achieve.

This is so for a variety of reasons. First, a single set of mandates cannot take into account the widely-varying circumstances found on individual railroads. For example, operating characteristics vary widely between freight, intercity passenger, and commuter railroads, and within railroads in each of these categories.

Second, collectively-bargained labor agreements must be taken into account when addressing fatigue. Labor agreements commonly include provisions governing seniority, income, methods of calling crews to duty, and many other matters that impact how often particular employees work. These agreements differ from one locale to another.

Moreover, rail operating crew pay scales typically reflect pay premiums for work beyond specified thresholds. This is why rail unions have traditionally resisted modifications to the HSA that would limit the freedom of their members, if they so choose, to maximize hours worked (within the limits of the HSA) and thereby maximize earnings.

The conflict between collectively-bargained agreements and government regulation is exemplified by the case of railroad signal employees, who install and maintain signal systems that direct the movement of trains. To enable signal employees to finish their work at far-away sites without having to commute multiple times, railroads and signal employees historically have agreed to work schedules of eight consecutive work days (ten hours each day, not including extended work days in emergency situations) followed by six consecutive days off. Although these work schedules are permitted under the HSA and would result in much less total off-duty travel time for employees working a substantial distance from home, they are not permitted by Federal Motor Carrier Safety Administration (FMCSA) hours-of-service regulations, which apply to the many railroad signal employees who drive commercial vehicles to perform their duties.

For several years, railroads and rail labor (through the Brotherhood of Railroad Signalmen) have petitioned FMCSA to allow the Congressionally-imposed requirements of the HSA to take precedence over FMCSA's hours of service requirements. To date, FMCSA has refused. Railroads respectfully urge members of this committee to encourage FMCSA to accede to this reasonable request.²

Third, regulations could stifle needed innovation. Rail labor and management are constantly gaining knowledge in the area of fatigue, especially practical experience from projects they have begun. Flexibility is needed to facilitate new projects and changes in existing ones, but regulations could "lock in" procedures and preclude innovations.

Fourth, nonproductive work/rest rules could impair the railroads' ability to provide efficient, cost-effective service to their customers. Unproductive regulations could hinder rail service without improving safety.

These important caveats notwithstanding, railroads are amenable to a careful reexamination of the HSA's statutory limitations. Several key principles should be kept in mind:

- Railroads want fully rested crews.
- After 12 hours of service, crews in limbo time should receive additional rest after limbo time.
- To the extent practicable, fatigue management policies should be based upon scientific research.
- Railroads are willing to provide more than the statutorily-required rest time at both home and away terminals to assure that crews are fully rested.
- Railroads are willing to require employees to take time off for rest opportunities.
- Fatigue management issues are a joint responsibility of the railroad and individual employees.

² I testified on this issue to this committee on June 22, 2000. On August 21, 2001, several members of this committee wrote to then-DOT Secretary Norman Mineta asking him to require that the FMCSA's hours of service requirements not apply to railroad signal employees.

“Limbo Time”

As noted earlier, the Hours of Service Act limits the number of hours that train crew employees can remain on duty. At times, though, a train may be unable to reach its scheduled (or even a convenient) crew change point within its crew’s allotted 12 hours. When this happens, the crew becomes “outlawed” and must immediately stop the train and wait for a new crew to replace it. Transportation of the replacement crew to the train, and of the outlawed crew from the train to a designated³ location where it is released from duty, is called “deadhead” transportation. Deadhead transportation is typically provided by other rail personnel or by private contractors hired by railroads for this purpose.

For purposes of the Hours of Service Act, once a replacement crew reports for duty, the time it spends waiting to be taken to a duty assignment, and the time it spends being transported, count as time on duty. However, time that outlawed crews spend waiting for deadhead transportation, and the time they spend being transported to where they are released from duty, count as neither time on duty nor time off duty. Instead, this time is considered “limbo time.” Employees’ off-duty rest time begins only after they are released from duty.

The concept of limbo time was created in an amendment to the HSA passed by Congress in 1969. Prior to then, time spent deadheading from a duty site to a terminal counted as off-duty time. As a result, employees often spent some of their off-duty time not resting, but deadheading. When the 1969 legislation was being debated, rail unions claimed that all time spent deadheading should be classified as time on duty. Railroads disagreed with respect to time spent deadheading from a duty site, on the grounds that counting this as limbo time (rather than off-duty time) eliminated the chance that deadheading would contribute to

³ For example, to a terminal or a place of lodging.

greater fatigue. Moreover, it was recognized that if time spent deadheading from a duty site were counted as on-duty time, railroads would have to calculate the approximate deadheading time and stop the train early enough to take account of that interval. Any miscalculation would lead to a violation of the HSA. This would create significant operating difficulties for railroads, substantially increase railroad costs (that rail shippers would have to cover), and reduce the efficiency of freight transportation.

The enacted statute — on duty at a shift's beginning, limbo time at its end — is consistent with the FRA's position since 1969, except for a brief period in the 1990s.⁴

Rail employees are paid for limbo time. Nevertheless, rail labor has long tried to convince railroads, regulators, legislators, and, in 1995, the U.S. Supreme Court, that limbo time should be abolished altogether, or at least for the time an outlaw crew spends waiting for deadhead transportation. According to this argument, whenever more than 12 hours elapses from the time a crew reports for duty to the time it is formally released from duty at a designated location, it is a violation of the HSA.

Railroads strongly disagree with this view. As the Supreme Court noted in its 1996 decision⁵, on-duty time typically includes those hours that contribute to an employee's fatigue during his or her shift. Thus, time spent waiting for deadhead transportation to a duty site is properly classified as on-duty time because, along with the time spent in transportation itself, it contributes to employee fatigue during the work assignment. But time spent waiting for

⁴ In 1990, rail labor filed suit in California and Oregon claiming that time spent waiting for deadhead transportation from a duty site is time on duty under the HSA. The Court of Appeals for the Ninth Circuit agreed. For the sake of national uniformity, the FRA then decided to apply the Ninth Circuit's interpretation of the HSA nationwide. In response, several major railroads sought review, in the Court of Appeals for the Seventh Circuit, of the FRA's order changing its interpretation. The Seventh Circuit rejected the Ninth Circuit's interpretation. The FRA then switched back to its original position that time spent waiting for deadhead transportation from a duty site is limbo time. Rail labor then appealed to the U.S. Supreme Court, which, in a unanimous 1996 decision, affirmed the Seventh District ruling.

⁵ *Brotherhood of Locomotive Engineers v. Atchison, Topeka & Santa Fe R. Co.*, 516 U.S. 152 (1996).

deadhead transportation away from a duty site and time spent in deadhead transport do not cause fatigue that implicates safety concerns. This is so because no matter how much time employees must spend deadheading from a duty site, they still must receive the requisite off-duty time once they are released from duty and before beginning a new shift. Consequently, as long as crew members are not engaged in or connected with the movement of a train, time spent waiting for deadhead transportation from a duty site and time in the deadhead transportation itself should not count as on-duty time.

Moreover, classification of limbo time as on-duty time would impose on railroads the very scheduling problems that Congress sought to avoid when it created limbo time in 1969. As noted earlier, if time spent deadheading from a duty site were counted as on-duty time, railroads would have to calculate the approximate deadheading time and stop the train early enough to take account of that interval. The creation of limbo time solved the problem of the employee who was forced to spend some of his or her off-duty rest time in deadhead transportation, but it did so without imposing intractable scheduling burdens on railroads that would do nothing to improve safety but would lead to significant inefficiencies and higher costs for rail customers and the economy at large.

Conclusion

Railroads' commitment to safety is absolute. Indeed, through massive investments in safety-enhancing infrastructure and technology; employee training; cooperative efforts with labor, suppliers, customers, communities, and the FRA; cutting-edge research and development; and steadfast commitment to applicable laws and regulations, railroads are at the forefront of advancing safety.

Combating fatigue is a shared responsibility. Railroads recognize that they must ensure that employees have sufficient opportunity to rest, and they are open to reasonable

changes to the HSA to help assure this outcome. For their part, employees are responsible for using a sufficient amount of the time made available to them for rest. No legislative, regulatory, or corporate measure can make employees devote their time to any particular activity.

Railroads and their employees are best able to design tailored fatigue countermeasures to match particular situations. Ill-considered blanket statutory or regulatory requirements under the guise of fatigue management could undercut the cooperative efforts of rail labor and management by eliminating the flexibility necessary to test and implement custom-tailored, effective fatigue management programs.