

PETITION FOR RECONSIDERATION
FILED WITH THE
FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION
REGARDING THE ORDER ISSUED ON
HOURS OF SERVICE OF DRIVERS; FINAL RULE
49 CFR PARTS 385, 390, and 395
70 Federal Register 49977 *et seq.*, August 25, 2005

This is a petition for reconsideration of the final rule promulgated by the Federal Motor Carrier Safety Administration (FMCSA) establishing the hours of service (HOS) for drivers of commercial motor vehicles (CMVs), published at 70 FR 49977 *et seq.* (Aug. 25, 2005) (“2005 final rule”). This petition is filed by Advocates for Highway and Auto Safety, Citizens for Reliable and Safe Highways (CRASH), the International Brotherhood of Teamsters (IBT), Parents Against Tired Truckers (P.A.T.T.), Public Citizen and Trauma Foundation, pursuant to 49 C.F.R. Part 389.35 (Oct. 1, 2004). Petitioners delineate below the numerous reasons why major aspects of the 2005 final rule are not practicable, are unreasonable, and are not in the public interest.

I. Introduction

The rulemaking proceeding to adopt a revised hours of service (HOS) regulation suffers from a number of major shortcomings in terms of the approach taken by the FMCSA to address serious health and safety concerns for truck drivers and the public. In establishing the FMCSA as a safety agency for motor carrier operations,¹ Congress made it the fundamental goal of this new agency that it shall “consider the assignment and maintenance of safety as the highest priority, recognizing the clear intent, encouragement, and dedication of Congress to the furtherance of *the highest degree of safety* in motor carrier transportation.” 49 U.S.C. § 113(b) (2004) (emphasis added). Safety is the paramount mission of the FMCSA. While the agency has inherited pre-existing requirements that obligate the agency also to consider the costs and benefits that its regulations may impose on the trucking industry and the public in the course of rulemaking, the touchstone of the agency mission remains and must be public safety and the safety of the truck drivers it regulates.

Nevertheless, throughout the preamble of the 2005 final rule, the agency repeatedly cites its general obligation to pursue benefit/cost analysis while submerging its specific mission to ensure public safety to second rank importance. Time and again the preamble to 2005 final rule cites the economic efficiencies that benefit the trucking industry as outweighing the safety costs that will be borne by the public. In every

¹ Motor Carrier Safety Improvement Act of 1999, Pub. L. 106-159, Title I, § 106 (Dec. 9, 1999).

instance where safety and economic burdens are balanced, the agency has opted to choose economic productivity of the trucking industry instead of determining the issue in favor of public safety. The determinations made in the 2005 final rule are openly contrary to the agency's mission and highest priority, and should be reconsidered.

In addition, the FMCSA's approach to its evaluation of the relevant data and research amounts to a misuse of the scientific evidence in the administrative record. Admittedly, the agency has an onerous task of reviewing and assessing the validity of numerous research reports and studies from various fields of sleep science, medicine, and environmental health, as well as many types of other data. While no small task, the agency must accomplish this obligation fairly and evenhandedly. It is evident, however, that the only studies that the agency finds to be accurate and credible are those that reinforce the agency's previous and preexisting view, embodied in the existing HOS regulation adopted April 28, 2003 (68 FR 22456) ("2003 final rule").² Studies that disagree with the agency determinations in the 2003 final rule are faulted, distinguished, and otherwise found wanting in the 2005 final rule. Yet, studies with similar faults or shortcomings that support the agency's previous position are nevertheless found to be credible and are relied on by the agency to justify the 2005 final rule. The agency has carefully cherry-picked the relevant research in order to find support. The body of scientific and medical research that does not support the agency determinations in this rule is substantial and cannot readily be dismissed. The agency should reconsider its selective use of the applicable studies and place more weight on the need for prudence and caution in regard to public safety. Even where the agency states that the research evidence is unclear, not conclusive, or divided, the agency discards any countervailing science and research findings and unerringly determines that its prior policy choices in the 2003 final rule should be sustained. In light of the massive amount of evidence that does not support the agency's conclusions, and given the agency's mission to uphold safety as its highest priority, the results of FMCSA's review of the scientific evidence in the record is unfair and heavy-handed, and its final rule consistently places a thumb on the side of the scale for industry productivity in order to outweigh any safety benefits or to dismiss adverse safety impacts.

This petition for reconsideration demonstrates that the FMCSA has not justified the main features of the HOS regulation contained in the 2005 final rule in several major respects, including the failure to adequately explain and justify: the dangerous consequences of the dramatic increases in potential exposure to adverse health impacts commensurate with the much longer working and driving hours over 7 and 8 consecutive calendar days; the addition of an 11th hour of consecutive driving time in each shift; the adverse safety impacts of the much longer cumulative working and driving hours; adoption of only a 34-hour off-duty restart period; permitting a 21-hour rearward

² Except for regulatory modifications to the provisions governing short-haul drivers and sleeper berth use, the 2005 final rule is identical to the 2003 final rule.

rotating shift schedule; the determination to allow a shift work limit of 16 hours for short-haul drivers for any two (2) days in a weekly tour of duty; and the deferral of rulemaking for time-certain action on the adoption of electronic on-board recorders. A number of other issues including the assumptions used in the agency's regulatory impact analysis are also specifically addressed in this petition.

II. Misuse of Data

In its explanation of the 2005 final rule, FMCSA cites a number of sources for relevant information and data for the nearly identical rule that is, on an interim basis, already in effect as a result of the 2003 final rule. Much of this information is anecdotal, self-reported, unscientific, biased, or inapposite, and cannot be relied on by the agency as the basis for promulgating this final rule. The agency, nevertheless, invokes these sources in the preamble of the final rule in order to produce an avalanche of pseudo-factual information tending to support the determinations in the final rule.

Among these efforts, FMCSA attempts to foster acceptance of an improved safety record of drivers and motor carriers occurring in the first three-quarters of 2004 as compared with the first three-quarters of 2003 as somehow evidencing the positive influence of the January 2004 implementation of the 2003 final rule in reducing fatigue-related crashes. Although the FMCSA ultimately rejects reliance upon carrier-reported information that supposedly shows lower crash rates in 2004 following the January implementation of the final rule, *id.* at 50010, it nevertheless relies upon a comparison of allegedly favorable crash figures from the Fatality Analysis Reporting System (FARS) showing that over the first 9 months of 2004, fatigue-related crashes declined 11.8 percent from 1.7 percent to 1.5 percent in 2004.

The attempt to invoke fatigue-related truck crashes in the year of initial implementation of the 2003 final rule is clearly inappropriate and cannot be relied on by FMCSA for several reasons and, accordingly, can form no part of the agency's failed effort to justify the 2005 final rule.

First, the agency itself has provided a previous, extended discussion of why fatigue-related crash reporting by police as entered in the FARS data system is unreliable. In fact, the agency itself, because of the unreliability of police accident reports (PARs) that code the presence of fatigue, augmented its estimate of fatigue-related crashes by the use of other methods to reach a much greater quantified fatigue contribution to fatal fatigue-related crashes in the 2000 HOS Notice of Proposed Rulemaking (NPRM) and in its accompanying *Preliminary Regulatory Evaluation and Regulatory Flexibility Act Analysis* (PRE)³:

³ *Preliminary Regulatory Evaluation and Regulatory Flexibility Act Analysis*, Notice of Proposed Rulemaking, 65 FR 25540 *et seq.*, May 2, 2000, Docket No. FMCSA-1997-2350.

There are a number of difficulties police face in determining whether fatigue contributed to an accident. First, the responding officer's primary concern is assisting accident victims and restoring the flow of traffic. Investigating the causes of the accident is often a second (or lower) level concern. Second, few officers are trained in accident reconstruction, and they therefore do not have the training to conduct a detailed investigation of the physical and mechanical evidence. Therefore, many police officers must rely on eyewitness and other oral evidence.

This results in an additional problem. By the time an officer interviews surviving crash-involved drivers, any signs of fatigue are likely to have worn off. The stress of the crash produces an adrenaline surge, eliminating any traces of fatigue and in fact enhancing the drivers [*sic*] sense of alertness and awareness and acuity, at least for the short term.

PRE at 21.

The FMCSA points out that FARS data coders "must rely on the original police accident report[.]" but that "[f]atigue, of course, is particularly difficult to assess, even with in-depth investigations, since there is no physical evidence of fatigue. The assessment is usually based on statements of the involved parties or witnesses." *Id.* at 25.

Furthermore, the agency argues that fatigue crashes are probably underestimated because it may often play a less direct role in triggering a crash given the fact that "a sizable literature demonstrates that fatigued individuals are prone to a variety of mental and physical errors[.]" including studies that show that cognitive functions of tired drivers are more compromised than their physical performance. *Id.* at 22. This indicates that other errors indicated on a PAR may be also due to fatigue because this impairment produces low vigilance or alertness. *Id.*

This evaluation led the agency to emphasize "the magnitude of the fatigue problem, and demonstrate the substantial differences in estimates of the size of the problem." *Id.* at 25. The FMCSA then reviewed research literature and other data sources, which led the agency to regard the PARs-based annual fatigue-related crash data in FARS as an underestimation of its contribution to truck fatal crashes. *Id.* at 24-30.

Most analysts believe that the incidence of fatigue-related crashes is higher than the 2% figure from the PARs, and many put the true figure well above the 2.8 to 6.1% range presented in table 14. As noted above, fatigue increases the likelihood that drivers do not pay sufficient attention to driving or commit other mental errors. * * * [I]n-depth studies of crashes have found that inattention and other mental lapses contribute up to 50% of all crashes. While fatigue may not be involved in all these crashes, it clearly contributes to some of them. *We*

estimate that 15 percent of all truck involved fatal crashes are 'fatigue-relevant', that is, fatigue is either a primary or secondary factor."

Id. at 30 (emphasis supplied).

The agency essentially halved this figure in the 2003 final rule, primarily because the reduction in the percentage of fatigue-related fatal crashes aided its benefit-cost analysis, by enabling the industry's productivity gains overwhelm the increase in both the relative and absolute risk of fatigue-related crashes that result from extending driving shift each day from 10 to 11 consecutive hours. *See, e.g., Regulatory Impact Analysis and Small Business Analysis for Hours of Service Options*, Federal Motor Carrier Safety Administration, December 2002, at 8-10 – 8-15. Nevertheless, this estimate still relied upon sustained agency doubts about the accuracy of PARs-based FARS fatigue-related crash figures (*id.* at 8-10) and, therefore, FMCSA augmented the low figures of FARS-reported fatigue crash data with the addition of crashes due to the influence of fatigue on driver attention, for example. *Id.* at 8-14. As a result, the agency reduced its estimate of fatigue-related fatal crashes from its figure in the 2000 NPRM by adding inattention/fatigue inattention crashes to FARS fatigue-only figures, modified by data from the Motor Carrier Management Information System, and arrived at an average of 8.15 percent of fatal truck crashes due to fatigue.⁴ *Id.*

⁴ Petitioners repeat here their longstanding disagreement with the FMCSA's efforts to reduce the impact of fatigue in its contribution to large truck crashes, including fatal crashes, by relying on manipulation of FARS coded information on fatigue. In the RIA, the FMCSA states that it used FARS, but that the data base "was edited to eliminate records on individual crashes where key data were missing, *and also where primary fault appeared to lie with other vehicles (not trucks) involved in the crash, and with certain hazardous weather conditions.*" RIA at 43. In combination with an addition of inattention crashes, whose representation in the final calculation of 8.15 percent of fatal large truck crashes of 20 percent also is not shown by other than conclusory statements, the agency arrived at the fatigue factor used as the platform for its calculation of safety costs and benefits.

The agency has previously rejected as a matter of record the assignment of fault to other drivers based on FARS codes. *See, Motor Carrier Safety Analysis, Facts, & Evaluation (MCSAFE)*, 2:I (October 1996), 2:II (November 1996). Moreover, even studies invoked and relied on by the agency make it clear that raw FARS coded data cannot be used to judge which vehicle initiated a maneuver leading to a two-vehicle crash between a large truck and a passenger vehicle. The Research Analysis Brief published by the Federal Highway Administration, *Driver-Related Factors in Crashes between Large Trucks and Passenger Vehicles*, FHWA-MCRT-99-011, April 1999, admits that the extent to which the drivers of the trucks and of the cars were both able to accurately describe events to investigating officers following the fatal crashes is unknown. Moreover, the agency admits that only one-half of the fatal crashes between one large truck and one passenger vehicle even has any physical evidence about each vehicle's maneuver and physical position prior to the crash for supporting assignments of FARS driver codes. *Id.* at 4. As a result, FARS coders are relying on PAR indications of the presence of fatigue that often are the product of a surviving party – usually the truck drivers – interviews that may not reveal the presence of fatigue, as the agency itself has acknowledged during this rulemaking. PRE at 21, 25.

Consequently, it is patent that the agency cannot claim an improvement in fatigue-related fatal crashes based only on a 9-month data change of 2003 to 2004 unadjusted FARS figures by assuming a far higher contribution to fatigue in its preamble to this final rule and in its accompanying RIA. In fact, the agency dismisses reliance on this early FARS data in the preamble of the instant final rule: “Although this data suggests that fatigue-related crashes have fallen since the 2003 rule became effective, *this newer data is mostly preliminary, self-reported without statistical controls, and also reflects small sample sizes, all of which – once again – sometimes leads to inconsistent findings.*” 70 FR 49981 (emphasis supplied). Moreover, the agency further negates its own case for this claimed improvement in fatigue-related crashes in 2004: “It is impossible to definitively link a specific provision of the 2003 rule with the improved safety performance during 2004.” *Id.* at 50013.

It therefore is clear that the FMCSA cannot invoke a comparison of unadjusted, preliminary FARS figures of part of 2004 with part of 2003, figures which the agency itself acknowledges constitute a chronically underreported incidence of fatigue-related crashes, to claim somehow that the final rule implemented in January 2004 has led to a reduction in fatal fatigue-related crashes.

III. FMCSA Should Reconsider The Determination That A Substantial Increase in Allowable Driving and Working Hours in the Final Rule Will Have No Adverse Health Impacts On Truck Drivers

Although this 2005 final rule, as was the case with the 2003 final rule that preceded it, allows drivers to accumulate far more working and driving hours than permitted under the pre-2003 regulation (49 CFR Pt. 395 (Oct. 1, 2002)), the agency nevertheless has concluded that the much greater potential exposure by drivers operating CMVs⁵ to a variety of health threats, including diesel emissions, “does not have a deleterious effect on the physical condition of drivers.” 70 FR 49981. The FMCSA reaches this conclusion on the basis of three major considerations, none of which withstands close scrutiny.

First, the agency claims that, although there are far longer working and driving hours permitted by the 2005 final rule,⁶ the potentially very large increase in exposure to

⁵ Since the 2005 final rule includes, as in 2003, an exemption for motor coach drivers, who continue to operate under the pre-2003 HOS regulations, this petition applies only to HOS regulation of truck drivers.

⁶ The FMCSA describes these dramatic increases in driving and working hours under the new HOS regulation in only one section of the preamble, 70 FR 50021-50022, and again in the accompanying Regulatory Impact Analysis. In the 2005 NPRM, the Agency explained that the restart provision: provides an opportunity for increases in the total hours of permissible on-duty time in a 7-day period, after which a driver may not drive a CMV, from 60 hours to 84 hours. It also provides an opportunity for increases in the total hours of permissible on-duty time in an 8-day period, after which a driver may not drive a CMV, from 70 hours to 98 hours and, [*sic*] provides an opportunity

health insults and pathologies such as diesel emissions, diabetes, cardio-vascular disease, and whole body vibration will not be correlated with increased health risks in these areas because of a lack of definitive studies demonstrating conclusive, direct causal relationships between exposure (the dose) and the severity of the adverse health impact (the response),⁷ including those studies reviewed by the Transportation Research Board's special committee empanelled to perform a health literature review (TRB Health Panel).⁸ Accordingly, FMCSA claims it cannot quantify health risks to drivers in connection with the larger number of driving and working hours permitted by the final rule, and therefore cannot conclude that fewer hours working or driving would reduce the health risk of exposure to diesel emissions, for example, which, in turn, would reduce the incidence of cancer in CMV drivers. *Id.* at 49986. In this connection, the agency also dismisses even credible epidemiological studies because “[e]pidemiological studies can never prove causation; that is, they cannot prove that a specific risk factor actually causes the disease being studied.” *Id.* at 49982. However, FMCSA later concedes that “[s]tudies show a causal relationship between exposure to diesel emissions and lung cancer,” *id.* at 49985, and that the National Institute for Occupational Safety and Health (NIOSH) “review [submitted to the docket] generally concluded that long work hours appear to be associated with poorer health, increased injury rates, more illnesses, or increased mortality.”⁹ *Id.* at 49989.

This stance by the agency – rejecting all relevant health-related literature whose weight overwhelmingly links increased exposure to specific health risks with increased numbers and percentages of workers suffering disease, injury, and death – is both imprudent and countermanded by the agency's own contracted TRB Health Panel review of relevant health literature. Although that review radically reduced the number of research studies subjected to specific written evaluation in the previously cited TRB Health Panel review,¹⁰ even the 25 health-relevant studies that were summarized in the Synthesis provided the basis for the Health Panel to find that :

for increases in the maximum driving time permitted in an 8-consecutive-day period (from 70 hours to 88 hours). 70 FR 50021.

⁷ *See, id.*, at 49988-49989 for this agency argument with respect to cardiovascular disease.

⁸ *CTBSSP Synthesis 9: Literature Review on Health and Fatigue Issues Associated with Commercial Motor Vehicle Driver Hours of Work* (TRB Health Panel), Transportation Research Board, National Academy of Sciences, August 9, 2005, FMCSA Docket No. 2004-19608-2084, filed August 10, 2005.

⁹ However, the agency attempts to blunt this overall NIOSH finding by pointing out that the NIOSH review concluded that the relation between long working hours and health is uncertain from available studies. *Id.* at 49990.

¹⁰ The 6 members of the Health Panel assigned to evaluate health-related research publications found more than 1,850 articles, which were screened for actual review. Of that number, 55 articles were reviewed and, of that number, 25 articles were chosen for written summarization by one of the primary reviewers to included in the synthesis “based on the validity of the methodology, the relevance of the studied population

- Lung cancer is likely caused by exposure to diesel exhaust and *the longer that exposure lasts the more likely it is that a cancer will develop*. Though the evidence linking this exposure to bladder cancer is less robust than that to lung cancer, *it remains likely that there is such a relationship and that it is governed by a positive dose-response curve*.
- There is some evidence that cardiovascular disease is caused in part by truck driving and *its risk increases with the duration of this activity and the disruption of the sleep cycle*.
- Based on exposure assessments, *noise-induced hearing loss could well be a result of a working lifetime as a driver*. * * *
- *There are several studies available . . . that contain objective evidence of vertebral pathology related to an occupation as a professional driver. In conclusion, the available data support the hypothesis that there is likely a causative relationship between professional driving and a variety of vertebral disorders as well as LBP [Low back pain] syndrome.*¹¹

It is clear, then, that, in the best judgment of the TRB Health Panel members charged by the FMCSA with reviewing health literature relevant to the health risks of CMV driving, the preponderance of the evidence in the research literature reviewed shows an association between the amount of exposure to certain specific health insults and the level of injury and disease incurred by commercial drivers. This finding is not directly engaged by the FMCSA anywhere in the final rule or in the Regulatory Impact Analysis (RIA).¹² In fact, the latter document takes no quantitative notice of the benefits and costs of raising the number of driving hours over 8 consecutive calendar days from 70 hours under the old rule to 88 hours under both the 2003 and 2005 final rule, and the amount of working hours over 8 consecutive calendar days from 70 under the old rule to 98 under the both the 2003 and 2005 final rules. The increase in available driving hours over 8 consecutive days through the maximum use of the agency's 34-hour "restart" provision is **28 percent more** than under the pre-2003 HOS regulation and, similarly, the increase in available total working hours over 8 consecutive days is **40 percent more** than under the pre-2003 regulation. This policy choice therefore subjects drivers to

to truck driving, and the quality of the statistical analysis of health outcomes." "CTBSSP Synthesis 9 . . .," *op. cit.*, at 8. Petitioners do not agree with the judgment of the Health Panel that many of the studies excluded from written review are not directly relevant to the issue of adverse health impacts on CMV drivers, particularly those studies that were excluded on the basis that the study population was not relevant to the health impacts of long working and driving hours on CMV drivers.

¹¹ *Id.* (Emphasis added). The TRB Health Panel found less strong relationships in the reviewed health research literature between commercial driving and other musculoskeletal disorders, gastrointestinal disorders as related to differing shift assignments and circadian rhythm disruptions, separate adverse health impacts due to circadian shifts alone in working and rest schedules, and reproductive health.

¹² *Regulatory Impact Analysis and Small Business Impact Analysis for Hours of Service Options*, prepared by FMCSA and ICF Consulting, Inc., August 15, 2005.

dramatically increased amounts of risk exposure to several serious and identified health threats.

The FMCSA disregards both the enormous weight of the research literature, as well as the professional conclusions of its own empanelled group of prominent health researchers on the TRB Health Panel, that several major areas of commercial driver health were increasingly subject to adverse impacts as the hours of working and driving also are increased above levels permitted by the pre-2003 HOS regulation. It is difficult to imagine a more imprudent posture assumed by an agency explicitly charged with protecting the health of CMV drivers and ensuring that its regulations do not have a deleterious effect on the physical condition of CMV drivers.

The agency's disregard of an enormous wealth of health literature showing the dangerous health effects of increasing the frequency or amount of exposure to disease mechanisms¹³ as well as the findings of its own TRB Health Panel permits an increase of driving hours over the pre-2003 HOS regulation from 10 to 11 and the abbreviation of the tour of duty "restart" time to only a minimum of 34 hours. This disregard of adverse health effects on drivers permits the agency in its RIA to purportedly show that productivity benefits to industry from having an extra, 11th, hour of driving in each shift and fewer hours off-duty at the end of a tour of duty than often obtained under the pre-2003 HOS regulation trump health and safety benefits of shorter consecutive driving hours and longer off-duty layovers before beginning another multi-day tour of duty.

The second tactic of FMCSA in this final rule to minimize both the adverse health impacts, and the safety impacts, of the much longer driving and working hours that it has allowed is to rely upon a snapshot of the trucking industry that uses small samples in the agency's own industry survey¹⁴ and drawn from other motor carriers' information,¹⁵ 70 FR 49984, to claim that the use of the larger number of working and driving hours in the 2003 final rule has been limited: "There is no indication that drivers are averaging more hours of work, as opponents of the 2003 rule had feared." *Id.* at 49981. Yet the agency's survey shows that 22.9 percent of over-the-road drivers exceeded 10 hours of driving, so the agency's own limited review shows that the motor carrier industry since the 2003 rule

¹³ Many of the studies showing these deleterious health effects of longer working and driving hours have been entered into Docket No. 2004-19608 by the agency itself over the last year and a half.

¹⁴ *Special Report – FMCSA Field HOS Survey: Motor Carrier Industry Implementation & Use of the April 2003 Hours of Service Regulations*, Federal Motor Carrier Safety Administration, June 2005. The survey only reviewed the hours of 542 commercial drivers from 269 motor carriers for two weeks over the span of July 2004 through January 2005 by reviewing the drivers' log books or time records.

¹⁵ The company data on hours worked drawn from motor carriers such as Schneider and J.B. Hunt are not susceptible of independent validation of their accuracy.

was fully implemented and enforced beginning in January 2005, has begun to use the 11th consecutive hour of driving in each shift.¹⁶

The final rule establishes minimum and maximum requirements for CMV driver HOS. As compared to the pre-2003 HOS regulation, the final rule permits drivers to drive 11 consecutive hours instead of 10, to rest for as little as just 34 hours between driving tours instead of having as much as three days or more off-duty at the end of a driving tour (for drivers who maximized the use of their driving time under the pre-2003 rule), and allows drivers who maximize their driving time per shift and tour of duty under this final rule to drive 17 additional hours in a 7-day driving tour and 18 additional driving hours in an 8-day driving tour. Having established by regulation increased maximum driving and working limits, as well as a reduced minimum off-duty time for each tour of duty, the agency cannot hide from the probable effect of these more taxing HOS limits on drivers' health. The agency is required to consider alternative implementation schemes with most or all drivers driving and working these permitted maximum hours while only taking the minimum off-duty time.

Since the 2003 and 2005 final rules adopt these limits, the agency cannot ignore the impact on drivers who avail themselves of the legal HOS limits. It is wholly inappropriate for the agency, having asserted that the rule changes are necessary to provide "flexibility" to the industry, to claim that few drivers will work to the HOS limits in the final rule and, therefore, that the final rule will have little or no impact on drivers. This posture is even less supportable when the agency simultaneously asserts that there will be large economic benefits to the industry from the same rule changes. Moreover, agencies do not generally engage in idle regulatory action that will have no practical effect. The "flexibility" which the agency claims is needed, and which will reap significant economic benefits to the industry, can only be of benefit if drivers are in fact driving and working the longer permissible hours, and taking fewer rest and off-duty hours. Indeed, regardless of the reliability of the information, FMCSA reports that in less than one year over one-fifth of drivers are already using the expanded HOS regime. This is precisely what the FMCSA intended in adopting the final rule. The agency must fairly confront and reasonably address the likely impacts to the health of drivers who avail themselves of its rule changing the HOS maximum driving and work hours and minimum off-duty time.

It is clear on its face that there is no reasonable basis to expect and believe that the enormous U.S. trucking industry has evolved to full use of the new 2003 HOS regulation in a single year. The agency's own citation of the driver survey conducted by Campbell and Belzer that drivers self-reported working on average 64.3 hours per week, a figure

¹⁶ Also *see*, the RIA at 19 where the FMCSA states the findings of a survey conducted by the Owner Operator Independent Drivers Association (OOIDA) that member drivers were already driving 10 or more hours in more than 25 percent of their work days during the first year of the new, 2003 HOS rule.

combining both 7-day (60 hours) and 8-day (70 hours) tours of duty permitted by the pre-2003 HOS regulatory regime. This survey, and many other comparable surveys, over the years have shown that long-haul, over-the-road drivers have made nearly maximum use of available driving hours and, because the pre-2003 HOS rule allowed an extension of working time beyond the 15 hours limit in each shift if the driver did not then resume driving,¹⁷ maximum use of the flexible working hours that were allowed.

Furthermore, there is a contradiction between the preamble statements that repeatedly play down the industry's likely use of the maximum available, increased number of both working and driving hours over 7 or 8 consecutive days, as well as the additional, 11th hour of driving provided by the 2003/2005 final rules and the agency's statements in its RIA. The FMCSA attempts to foster acceptance at multiple points in the preamble to this rule that the future of the trucking industry's use of the increased available driving and working hours will, for some unknown reason, reflect only the amounts used during 2004, that "[t]he theoretical availability of many more driving and on-duty hours under the 2003 rule is largely irrelevant[.]" *id.* at 50005, and that "[t]here is no reason to believe that a full 11 hours of driving will ever become the standard for the industry." *Id.* at 50010. However, the agency assumes in the RIA a very different view of the potential for increasingly intensive use of these dramatic leaps in the number of available driving and working hours.

In that RIA, the FMCSA relies on information drawn from Schneider, the Owner Operator Independent Driver Association (OOIDA) survey, the agency's field survey of only 542 drivers, and the Prof. Burks survey to strike the positive note that "the 11th hour is definitely being used." RIA at 2-24. Similarly, the agency emphasizes that the industry is still evolving in its use of the 11th, additional hour of consecutive driving time and that "many of the responding companies . . . may be building the 11th hour into their schedules," and that "[s]ome of the information from the Edwards interviews tells us that LTL [less than truckload] managers are now planning some runs that use the 11th hour. This would occur, for example, when a company finds that use of the 11th hour would bring one or more additional terminals within the overnight reach of a given terminal." *Id.* In fact, the agency expresses its optimism that the use of the 11th, additional hour of consecutive driving will expand: "[A]s the 11th hour of driving becomes more incorporated into normal operations in the future, we believe its use much more likely to increase rather than decrease." *Id.* at 6-77. This position in the RIA contradicts the preamble of the final rule and acknowledges that carrier operations will evolve to utilize the additional hour of consecutive driving. In fact, the agency goes out of its way to show how much more strongly productivity benefits for industry trump the safety Option 1 with a reduction in consecutive driving hours from 11 to 10 if carrier operations eventually utilize the extra hour: "If the use of the 11th driving hour doubled, Option 2 with 10 hours would become even less cost-beneficial relative to the original Option 2.

¹⁷ Title 49 CFR 395.3 (Oct. 1, 2002).

Also note that even if the use of the 11th hour dropped, because the use of the 11th hour is cost-beneficial *regardless of how often it is used*, variation of this single assumption could never make the restriction of the 11th hour of driving cost-beneficial.”¹⁸ *Id.* (emphasis supplied).

It is evident that the agency would like to have it both ways in this final rule: it relies on the considerable productivity gains triggered by the use of the additional 11th hour of driving that FMCSA allows in the 2005 final rule and yet also downplays in the preamble the potential increase in crash risk due to adding more driving hours by claiming that industry is not using – and will not use -- the extra consecutive hour of driving. It is apparent that the agency, in fact, expects the trucking industry to evolve to a fuller use of the 11th hour of driving in the relatively near future, an action that undermines any unsupported suggestion that a single year of carrier operations under the new, 2005 version of the HOS rule that supposedly shows working and driving hours as similar to the pre-2003 regulatory regime, somehow means that industry will never take full advantage of the expanded HOS permitted by the 2005 final rule.

Accordingly, the agency’s effort to assert that the 2005 final rule is health-neutral fails. Not only has the agency dramatically increased the number of hours commercial drivers can be exposed to diesel emissions, noise, and driving and working demands that, with such increased exposure, commensurately increase the risk of cancer, cardiovascular disease, and vertebral disorders, but its futile effort to convince the public that the trucking industry will not modify or expand its operations to increasingly take advantage of the enormous number of additional hours of work and driving made available by the 2005 final rule is nothing more than a unsupported pronouncement.

IV. The Regulatory Impact Analysis (RIA) Is Flawed And Does Not Support The Determinations Made in the Final Rule

FMCSA attempts to justify some of the main features of the 2005 final rule by relying on the benefits-cost analysis in the RIA. The RIA contains fatal errors and it fails altogether to model key features of the new final HOS regulation that are not justified anywhere in either the preamble of the final rule or in the RIA itself.

A. The RIA Does Not Model the 14-Hour Work Shift

The RIA fails to model and monetize the safety costs and benefits of a 14-hour work day shift. Instead, FMCSA models and quantifies only the effects of the incremental increase in driving hours allowed in each shift from the prior maximum of 10 hours to the 11 hours allowed under both the April 2003 and August 2005 final rules.

¹⁸ A summary statement of the considered regulatory options considered for costs and benefits is found in the RIA at ES-1—2.

The agency does not believe that the effects of work demanded of drivers apart from the driving task have time-on-task effects on driver fatigue, alertness, and performance during the work day due to such activities as loading and unloading. However, the agency itself contracted for and reported on the fatiguing effects of the additional work required of drivers and how the additional work impacts the ability of drivers to perform safely when actually operating their commercial motor vehicles.¹⁹

FMCSA is on record as conceding that time-on-task fatigue effects accrue not just from driving, but from the adverse impact on alertness and performance from all the duties and work performed by a driver over the course of a daily shift.²⁰ Furthermore, it recognizes that the effects of total time on duty directly impact the amount of driver fatigue in the preamble of the final rule: “[C]ontinuous daily wakefulness is among the strongest predictors of fatigue, and the Agency’s best judgment indicates *it outweighs driving time as a predictor of fatigue*. 70 FR 50038. If total duty time is the yardstick for the measuring the production of fatigue among truck drivers, then the FMCSA was duty bound to model and quantize its effects on driver alertness and performance both when driving and performing other tasks during each shift. Yet the RIA contains no benefit-cost analysis of allowing 14 hours of work each day that includes both a maximum of 11 hours of consecutive driving and 3 hours of other duty time.

B. The RIA Does Not Take Into Account Cumulative Increases In Driving and Work Hours Permitted Under The Final Rule

FMCSA completely ignores a quantified assessment of the costs and benefits of dramatically increasing cumulative truck driver hours of service for both work and driving under both the 2003 and 2005 final rules. That increase in total cumulative

¹⁹ See, e.g., T. O’Neill, *et al.*, *Effects of Operating Practices on Driver Alertness*, 1999.

²⁰ The rulemaking record is so heavy with citational support for the fatiguing effects of total shiftwork time-on-task, and not just accrued driving time in each shift, that one reference should suffice that was produced by the FMCSA itself with multiple research studies cited in support:

The research suggests that performance degrades and crash risk increases markedly after the 12th hour of any duty time during a work shift (Hamelin (1987); Brown (1994); Campbell (1988); Rosa and Bonnet (1993); Rosa (1991); Rosa et al. (1989); Harris and Mackie (1972); Mackie and Miller (1978); U.S. Army (1983); Transportation Research and Marketing (1985). 65 FR 25540, 25556 (emphasis supplied).

Moreover, the effects of total time-on-task and their palpable effects on worker and driver alertness and performance were documented with extensive support in Advocates’ 1997 docket submission dated June 30, 1997, to the agency’s advance notice of proposed rulemaking Docket No. FMCSA-1997-2350 and in our 2000 docket submission dated December 15, 2000, to the agency’s notice of proposed rulemaking in FMCSA Docket No. 1997-2350. Both sets of Advocates’ docket comments are incorporated by reference in their entirety in this petition for reconsideration.

working and driving hours is mentioned once in the RIA (but discarded for analysis)²¹ and mentioned with quantitative information in only one place in the preamble of the 2005 final rule where the agency states explicitly that the use of the restart provision:

Provides an opportunity for increases in the maximum driving time permitted in a 7-consecutive-day period (*from 60 to 77 hours*). Likewise, the restart provision provides an opportunity for increases in the total hours of permissible on-duty time in an 8-day period, after which a driver may not drive a CMV, *from 70 hours to 98 hours* and, [*sic*] provides an opportunity for increases in the maximum driving time permitted in an 8-consecutive-day period (*from 70 hours to 88 hours*).

70 FR 50021 (emphasis supplied). Also *see, id.*, at 50022.

FMCSA cannot argue that it was not reminded by its own contracted researchers about the importance of cumulative fatigue and the need to take it explicitly into account in its evaluation of the effects of longer driving and working hours in both the 2003 and 2005 final rules. On the very first page of the Trucks In Fatal Accidents study produced by Kenneth Campbell for the agency, the author asserts that, “[b]ased on the study of fatigue in other industrial settings, there are three factors that produce fatigue:

- Time on task
- Time of day (circadian component)
- Cumulative fatigue”²²

Similarly, the FMCSA itself acknowledges the findings of the preliminary reports of Jovanis *et al.* (2005) that, “[t]hrough time-dependent logistic regression modeling, the study found a pattern of increased crash risk associated with hours of driving, particularly in the 9th, 10th, and 11th hours, and *multi-day driving*.”²³ 70 FR 50021. Similarly, Dingus

²¹ “Also the data do not include any information on the driver schedule over a longer period than the shift in which the crash took place. Thus, it is not possible to determine if cumulative fatigue may have been a factor.” RIA at 44. With a single reference to a lack of data collected by Kenneth Campbell and the University of Michigan Transportation Research Institute (UMTRI), FMCSA cannot evade its burden to model the much greater working and driving hours permitted by both the 2003 and 2005 final rules due to the application of the 34-hour restart provision that created a sea change in HOS regulation by ending the use of a fixed work week of either 7 or 8 days and, instead, installing a “floating” work week which permits commercial drivers and motor carriers to dramatically expand the number of both driving and working hours over 7 or 8 consecutive calendar days.

²² Kenneth Campbell, *Estimates of the Prevalence and Risk of Fatigue in Fatal Crashes Involving Medium/Heavy Trucks from the 1991-2002 TIFA Files*, Final Report, August 2005 (“TIFA Report”).

et al. found in their evaluation of the adverse effects of sleeper berth use that critical incidents of solo drivers began to mount after the second and third shift over a multi-day driving bout due to the evident impact of cumulative fatigue that was not being eliminated with sleeper berth use.²⁴

The FMCSA might be tempted to claim that it addressed cumulative fatigue in the RIA because of its consideration in the cost-benefit analysis of two other, longer restart periods (Option 3: 58 hours; Option 4: 44 hours, RIA at ES-1), but that effort would fail because the purpose of the exercise had nothing to do with modeling and quantifying the safety costs and benefits of the longer cumulative working and driving hours allowed by the 2005 final rule. Instead, the agency wanted to demonstrate lower productivity benefits for the trucking industry that would occur with a longer restart period. A longer restart interval would result in drivers accruing fewer working and driving hours over 7 or 8 consecutive days. FMCSA also wanted to show that longer restarts do not supposedly result in improved sleep for commercial drivers. This is made clear by the agency's eagerness in Section 6 of the RIA to show that a shorter 34-hour restart period produces these larger number of working and driving hours over the same 7 or 8 consecutive calendar days, allegedly without any detrimental effect on drivers' ability to get sufficient sleep as compared with the longer minimum restart periods of Options 3 and 4.²⁵

C. The RIA Does not Use the Pre-2003 Regulation as the Baseline for Assessing Costs and Benefits

Finally, the agency's entire effort to justify its 2005 version of the HOS final rule fails at the threshold because it has chosen the wrong regulation as the baseline for analysis of the four regulatory options premised in the RIA. Although it is true that the agency reviews portions of the 2003 final with regard to the 10-hour driving maximum, the agency essentially imposes the 2003 regulation as the analytic baseline for its benefit-cost analysis. For example, the FMCSA considers two variations of the 34-hour restart provision that will allow longer layover periods before starting a new tour of duty, but fails to directly model and quantitatively assess costs and benefits of the new rule with its much longer working and driving hours in comparison with the pre-2003 rule.

²³ P. Jovanis, *et al.*, *Crash Risk and Hours Driving: Interim Report II*, Pennsylvania Transportation Institute, Penn State University, April 15, 2005 (hereafter Jovanis Report).

²⁴ T. Dingus, *et al.*, *Impact of Sleeper Berth Usage on Driver Fatigue*, Final Report FMCSA-RT—02-070, 2002. Also see, <http://www.fmcsa.dot.gov/facts/-research/briefs/Sleeper-Berth-Technical-Briefing.htm>.

²⁵ And, again, the FMCSA tries to have it both ways by showing the productivity benefits that result when the 34-hour restart provision is reduced close to the minimum layover time, and yet also attempt to argue that drivers are often taking far more time off than just the minimum of 34 consecutive hours. See, 70 FR 50022.

Instead, the FMCSA picks only two main features of the 2003/2005 final rules, the 11th consecutive driving hour and the 34-hour restart provision, and then constructs strawman arguments to show that no benefits analysis, no matter how extreme, can justify a return to only a maximum of 10 consecutive hours of driving and an expansion of the restart provision beyond 34 consecutive hours off-duty. As a result, the RIA of the 2005 final rule is a chimera – a strange hybrid of selected features of the 2003 final rule commingled with selected features of the pre-2003 final rule. Yet FMCSA fail to directly compare the August 2005 HOS final rule with the pre-2003 HOS regulation that includes, among other things, a fixed work week, no restart provision, and far lower total working and driving hours allowed over 7 and 8 consecutive calendar days. This bizarre exercise does not fulfill the agency's burdens to justify the 2005 final rule in comparison with the pre-2003 baseline regulatory regime.

The FMCSA, as already discussed above, attempts to dismiss the impact of this enormous increase in available total working and driving hours over 7 or 8 consecutive calendar days by appealing to information about carrier and driver practices during the first year of the implemented 2003 rule – information that cannot be independently corroborated.²⁶ This information purportedly shows that motor carriers and drivers are only partially availing themselves of these additional working and driving hours in the first year of the rule after full implementation in January 2004. However, a FMCSA snapshot of an evolving industry during its first year of operating under a dramatically different HOS regime cannot be used to predict what and how the trucking industry will change to accommodate the economic benefits of much longer working and driving hours in succeeding years. In fact, the agency has no support whatever in the rulemaking record for its pretense of being able to forecast the future operations of the trucking industry under the 2005 final rule. However, if the agency believes that the industry will not change under the greatly expanded hours of work and driving that it has permitted by the 2005 final rule, then it cannot rely on the claims and quantification of improved productivity benefits to industry that it makes repeatedly in the RIA by invoking exactly the increased use of these dramatically increased hours that it is at pains to deny in the preamble of the final rule will ever occur.

V. FMCSA Should Reconsider the Additional, Eleventh Hour of Consecutive Driving in Each Shift

In this final rule, the FMCSA attempts to show that the safety effects of the 11th hour of driving are relatively minor, and, moreover, those adverse safety impacts are outweighed by the productivity benefits of the extra hour of driving. 70 FR at, *e.g.*, 50012; RIA, Secs. 5 and 6. Basically, the agency attempts to convince readers that drivers are still well-rested and therefore able to drive the longer consecutive hours in

²⁶ The actual data and methods of collection for the various contractor and motor carrier company data relied on by the agency are not in the rulemaking record for evaluation of their accuracy by the public.

each shift. However, the record includes startling results from the Hanowski *et al.* (2005) study²⁷ that drivers were receiving only an average of 6.28 hours of sleep, the “approximately 6 hours of sleep” that the agency itself is forced to acknowledge from the research means that drivers under the 11 hours regime are chronically sleep deprived. This petition sets forth elsewhere (*see*, below, Section VII) the tortured – and self-contradictory -- rationalizations that the FMCSA offers to lower the bar for the required amount of sleep from 8 hours, to 7 hours, to nearly 6 hours as adequate for ensuring driver health, expunging sleep debt, eliminating fatigue, and restoring performance.

Because the RIA contains a fuller explanation, the following discussion will analyze the RIA’s conclusion that productivity benefits trump any reduction of consecutive driving time from 11 to 10 hours. According to the RIA, this is true even if one assumes, for example, that the contribution of fatigue to fatal truck crashes was far higher than the 8.15 percent assumed in both the 2003 and the 2005 final rules, and the capital value of a life in calculating the number of additional lives saved from moving from an 11 to a 10 hour limit on consecutive driving is effectively tripled. RIA at 6-77 – 78.

Apparently, the agency believes that it has decisively shown that an extra hour of consecutive driving time trumps any claim to the superior safety benefits of reducing driving time by an hour. However, the agency repeatedly undermines its own argument for the central reliability it places on the TIFA Study that it contracted for with Kenneth Campbell of the Oak Ridge National Laboratory.²⁸

The TIFA Report claims to show that the relative risk of a fatigue-related fatal truck crash begins to increase at a rapid rate from the 6th hour of consecutive driving time until, at the 13th or greater number of hours of driving, the risk has effectively increased by 14 times in comparison with the relative risk at the completion of 6 hours of driving. TIFA Report, Figure 9 and accompanying narrative, at 12. At the 10th hour of driving, there is a 2.63 percent contribution of fatigue to fatal crashes, and a 4.71 percent fatigue contribution to the relative risk of fatal crashes after 11 hours of driving. This is a startling 79 percent jump in relative risk from increasing consecutive driving time by only one hour.

It is clear that the agency’s benefit-cost analysis stands or falls on the use of the TIFA data, as modified by preliminary data from the Large Truck Crash Causation Study

²⁷ R. Hanowski, *et al.*, *Assessment of the Revised Hours-of-Service Regulation: Comparison of the 10th and 11th Hour of Driving Using Critical Incident Data and Measuring Sleep Quantity Using Actigraphy Data*, Virginia Polytechnic University, June 2, 2005, transmitted under cover letter dated July 11, 2005, to the FMCSA, entered into Docket No. FMCSA-2004-19608 on August 16, 2005, as Entry #2089.

²⁸ Kenneth Campbell, “Estimates of the Prevalence and Risk of Fatigue in Fatal Crashes,” *op. cit.*

(LTCCS). However, the sleep model, including the TIFA data, is not reliable on several counts in light of the agency's own caveats about their uncertainty.

The agency uses the Walter Reed dose-response (sleep restriction) model to quantify the effects of fatigue.²⁹ RIA at 5-41. That model, however, does not rely on actual vehicle operational data but rather on driver performance in driving simulators as well as performance on a Psychomotor Vigilance Test (PVT).³⁰ Most importantly, the Walter Reed study has no time-on-task considerations. A small sample group (50 subjects) of commercial drivers were controlled and monitored simply for the different amounts of sleep they obtained and how different groups with different amounts of sleep performed on a PVT test and in a driving simulator, as well as how much sleep was needed by subjects in the different groups to recover from varying amounts of sleep restriction.³¹

To remedy the lack of a time on task (TOT) multiplier to account for increases in relative risk as the hours of consecutive driving mount for a CMV operator, the FMCSA uses the TIFA relative risk calculations of the Campbell 2005 study (TIFA Study) and considered the additional hour-by-hour relative risk calculations drawn from the uncompleted FMCSA-contracted study by Paul Jovanis.³² Jovanis's study "data show an

²⁹ Balkin *et al.*, *Effects of Sleep Schedules on Commercial Motor Vehicle Driver Performance*, DOT-MC-00-133, May 2000. Also *see*, the FMCSA Tech Brief MCRT-00-014, September 2000. (The study is incorrectly cited in the bibliography of the RIA with a 2004 publication date. RIA at SB-1.)

³⁰ Advocates is already on record in several docket filings with the FMCSA about the unreliability of studies involving fatigue and alertness for workers, including vehicle operators, that use driving simulators to show any changes in worker or driver vigilance and performance.

³¹ *See*, the summary of findings in FMCSA Tech Brief MCRT-00-014, *op. cit.*, at 4.

³² P. Jovanis, *et al.*, *Crash Risk and Hours Driving: Interim Report*, Pennsylvania Transportation Institute, Penn State University, February 25, 2005; P. Jovanis, *et al.*, "Crash Risk and Hours Driving: Interim Report II," *op. cit.* The agency also considered other, recent research that it contracted with investigators at Virginia Polytechnic University (Hanowski *et al.*, *op. cit.*), but decided not to rely on it because the study does not calculate relative risk increases over the gamut of consecutive hours of driving but only compares the 10th with the 11th hour for any changes in crash risk. RIA at 44. This was a wise decision by the agency on other grounds given the fact that this study has a very small sample size permitting no credible generalizability to the trucking industry as a whole and fails to control for major confounders that would heavily influence relative crash risk from hour to hour. These and other shortcomings include:

- the use of only driving files – the researchers had no records of any non-driving work activities that would also impact driver alertness and performance;
- there was non-driving work even performed during breaks and, so, there is no way to separate non-driving work from rest breaks since there is only a record of driving time;
- an operating assumption of the study was to assume that any non-driving interlude of 34 or more hours meant that the driver had taken a restart layover before starting a new tour of duty, and there was no independent means of determining whether the driver worked during this period of 34 or more hours without driving;
- the investigators did not know whether data were not collected for any given shift;

11th hour risk factor of about 3.4, which would be substantially higher than the equivalent estimates derived from the Campbell-LTCCS [Large Truck Crash Causation Study] data discussed above.”³³ RIA at 47. However, for reasons that are not made clear in the RIA, the use of the Jovanis findings showing a much higher relative risk factor for the 11th hour of driving was eliminated from use in the benefits-cost analysis.³⁴

Accordingly, the agency has based its benefit-cost analysis on a model (called the Fatigue Avoidance Scheduling Tool or “FAST”) derived from the Balkin Study in an adaptation produced by Hursh *et al.*,³⁵ with the addition of a TOT multiplier based on the TIFA Study analysis.

Yet the agency acknowledges that these data are deeply flawed. FMCSA erodes its reliance on the TIFA relative risk calculation in the RIA itself and further undermines its credibility to the brink of discarding it in the preamble of the 2005 final rule. First, the agency points out a central shortcoming of the TIFA data themselves -- they do not reflect driving in the 10th and 11th hours under the implementation period of the 2003 final rule HOS regime, but rather under the pre-2003 HOS regulation:

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- the investigators included partial 11th hours of driving, *i.e.*, less than a full, additional 11th hour, which can substantially alter the change in relative risk from the 10th to the 11th hour of driving;
 - additional reductions of data involving the original 50 study subjects occurred.

Basically, the study has no value in demonstrating any changes in crash risk from the 10th to the 11th hour of driving because threshold research design principles were violated in conducting the study. Nevertheless, these manifold defects do not deter the FMCSA from repeatedly asserting that the Hanowski Study shows that there is no or a negligible adverse safety impact from drivers moving from a maximum of 10 to a maximum of 11 hours of consecutive driving time, much less averaging only 6.28 hours of sleep each day.

³³ The agency, however, does not rely on the Campbell LTCCS data analysis: “[I]t is important to note that the LTCCS data are still preliminary and have not yet been published in final form.” Those data, however, are overwhelmingly based on post-crash representations of driving hours by the surviving truck drivers involved in crashes and through inspection of their log books which are notoriously manipulated by drivers to simulate compliance with HOS regulations. *See, Large Truck Crash Causation Study – Interim Report*, DOT HS 809 527, September 2002; K. Campbell and M. Belzer, *Hours of Service Regulatory Evaluation Analytical Support – Task 1: Baseline Risk Estimates and Carrier Experience*; D. Belman and K. Monaco, *University of Michigan Trucking Industry Program Driver Survey 1997, 1998, 1999*; M. Belzer, *Sweatshops on Wheels: Winners and Losers in Trucking Deregulation*, Oxford University Press, 2000.

³⁴ Presumably, the rationale for the exclusion of the Jovanis Study findings in the RIA stem from the statement that “[t]he main limitation with this analysis is that it is representative of only one trucking industry segment (LTL carriers). Additionally, there are very few driver cases showing 11 hours of driving. . .” RIA at 47. However, this implied stance on the merits of the Jovanis Study is countered by the FMCSA’s assertion in the preamble of the final rule that the Jovanis Study methods appear to be valid. 70 FR 50012.

³⁵ S. Hursh, *et al.*, “Fatigue Models for Applied Research in Warfighting,” *Aviation Space and Environmental Medicine* 75:3 Suppl. (2004).

[B]ecause this data collection effort predates the 2003 rule change, the results reflect pre-2003 HOS regulations: driving time was limited to 10 hours, the minimum rest time between trips was only 8 hours, and there were no provisions for a restart of the cumulative 7/8 day duty period. Also, the data do not include any information on the driver schedule over a longer period than the shift in which the crash took place. Thus, it is not possible to determine if cumulative fatigue may have been a factor.

RIA at 44.

Further doubt is cast by the agency itself in its RIA on the reliability of the TIFA data from the Campbell analysis. Since the data claim on fatigue-related crashes in the 11th hour are few in the pre-2003 regulatory era, “[s]uch limited populations of fatigue-related crashes raises uncertainty with regard to the relative crash risk ratios associate with the later driving hours, since the misclassification of a single crash as fatigue-related can affect the resulting relative risk ratios quite substantially.” RIA at 46. Furthermore, there are other baseline concerns with the pre-2003 TIFA due to the limitation of consecutive driving time to 10 hours – driving during the 11th hour was illegal at the time the TIFA data were collected. *Id.* “As a result, the data on the frequency of driving 11 hours or more could be underreported. As such, it is unclear whether fatigue-related crashes are over- or under-represented in the TIFA data set, since it is not possible to determine whether any under-reporting involved all fatal crashes during the 11th hour of driving, or just those where the truck driver was determined to be fatigued.” *Id.* Accordingly, “the relative risk of the subpopulation of commercial drivers admitting to illegal driving during the 11th hour or later may not reflect the relative risk of drivers operating legally under the 2003 final rule. Unfortunately, TIFA data for calendar year 2004 (the first year when driving in the 11th hour was permissible) will not be available until late 2006.” *Id.*

This complete lack of relevant data to show the relative risk of driving during the 11th hours undermines FMCSA’s justification for adding another, 11th hour of consecutive driving time to the HOS regulation. The FMCSA’s entire benefit-cost analysis purportedly showing that industry productivity benefits trump safety benefits triggered by a return to a regime of 10 hours maximum driving time is based on a TOT multiplier for relative risk ratios using only pre-2003 data. Accordingly, the agency’s effort to rationalize this maneuver by conducting a “sensitivity analysis” is a house of cards.

Furthermore, FMCSA points out in the preamble of the 2005 final rule that the TIFA file “combines data from the FARS with additional data on the truck and carrier collected by the University of Michigan Transportation Research Institute (UMTRI) in a telephone survey with the truck driver, carrier, or investigating officer after the fatal crash.” 70 FR 49997. Because the TIFA file relies so strongly on interview information, “[d]espite its scope and complexity, however, TIFA data must be treated with caution.”

Id. Because FARS data has no information about the amount of driving hours that were accumulated by a driver at the time of a crash:

TIFA researchers therefore contact the driver (or the employing carrier) after the fatal crash to collect such information. However, a good deal of time can elapse (more than a year in some cases) between the date of the crash and the date the TIFA researcher first contacts the driver (or the employing carrier). This delay raises the question whether the driver can accurately recall his/her driving time so long after the incident.

Id.

The use of totally non-representative data from time periods preceding the implemented 2003 final rule and these concerns about both the accuracy and the fundamentally uncorroborated reliability of TIFA data undermine any effort by the FMCSA to rely on its benefit-cost analysis to justify the extra hour of consecutive driving time in the 2003 and 2005 final rules.³⁶ FMCSA itself warns at the outset of the preamble to the 2005 final rule that “[a]ll in all, we must thus be careful in applying this data to the 2003 rule or today’s rule . . .” 70 FR 49981. Unfortunately, the agency is not careful – it uses the TIFA data as the basis for a failed effort to demonstrate, using pre-2003 data from an era governed by a different regulatory regime, that the safety downside from the additional hour of driving is both minimal and overwhelmed by productivity benefits to industry. In fact, the FMCSA acknowledges that “[a]vailable information on the effect of allowing 11 hours of driving time is inconclusive.” *Id.* at 49999.

³⁶ Petitioners also point out the agency’s repeated effort especially in the preamble of the 2005 final rule to suggest, or to foster acceptance of the wholly unsupported belief, that the risk of driving more consecutive hours is somehow offset or neutralized by the additional time off provided for truck drivers in each shift.

- “Also, despite [TIFA] being the largest database available * * * we thus must be careful in applying this data to the 2003 rule or today’s rule, where the minimum off-duty time is 25 percent greater.” 70 FR at 49981.
- “The 2003 rule, which allows up to 11 hours of daily driving but requires 10 hours off duty, *may* have reduced the risk of driver fatigue and thus the percent of large truck fatal crashes involving fatigue.” *Id.* at 49997 (emphasis supplied).

The agency is well aware that it cannot demonstrate any causal relationship between allowing longer consecutive driving hours and requiring a longer off-duty period in each shift. For one thing, the research literature cited not only by Advocates but the studies even reviewed and entered into the docket by the agency itself, including summaries of studies (e.g., *An Annotated Literature Review Relating to Proposed Revisions to the Hours-of-Service Regulation for Commercial Motor Vehicle Drivers*, DOT-MC-99-129, November 1999, FMCSA-1997-2350-956) have shown over many years of investigation that as workers are demanded to work longer and longer shifts, especially those in excess of about 9-10 hours, their ability to recover from the extraordinary demands placed on their protracted vigilance and performance cannot be countered by providing them longer daily off-duty periods.

VI. FMCSA Should Reconsider The Determination to Adopt Only A Thirty-Four Hours Off-Duty “Restart” Provision

The whole purpose of the restart provision in both the 2003 and 2005 final rules is clearly the desire of motor carriers to get drivers back on the job in contrast to the pre-2003 fixed-length work week in which drivers were prohibited from working or driving if they had already exhausted their available, maximum duty hours over 7 or 8 consecutive days. The FMCSA asserts in the preamble of the instant final rule that it “has determined that the research on CMV drivers supports the assessment that a recovery period of 34 hours is sufficient for recovery from cumulative fatigue. The importance of two night (midnight to 6 a.m.) rest periods was highlighted in the 1998 HOS expert panel report.” 70 FR 50017. But the 34 hour restart provision does not require two midnight to 6 a.m. rest periods, but only that drivers take a minimum 34 hours off-duty before restarting their working and driving “clock” to accrue another tour of duty that can total up to 60 hours in 7 “floating” work days or 70 hours in 8 “floating” work days. Moreover, the agency itself has pointed out over the history of this rulemaking that LTL drivers often work entirely at night or that long-haul, over the road drivers can have changes in their shifts from one tour of duty to another, or even within the same tour of duty. RIA at 41. As a result, many drivers will be released from duty at a time when they can only manage a single sleeping period, not two, in a minimum 34-hour layover because their inverted or acircadian schedule undermines efforts to sleep more than once over a 34-hour “restart” period. The FMCSA implies as much in the preamble of the final rule: “The majority of driver (about 80 percent) are daytime drivers, who would likely start their recovery period between 6 p.m. and midnight, and therefore these drivers would have the opportunity for two full nights of sleep prior to the start of the next work week.” It follows that many drivers, especially those on rotating shifts or inverted (nighttime driving, daytime sleeping) schedules would be able to manage only a single sleep period.

The agency engages in an extensive discussion of some of the research showing that a 34 hours off-duty “restart” layover is insufficient for recuperative rest and sleep. The FMCSA instanced the research advanced by the Insurance Institute for Highway Safety, including “a 1997 observational study of over-the-road drivers³⁷ [that] found that a 36-hour recovery period was inadequate, and a 2005 analysis of data from a national LTL firm suggest[ing] that there may be increases in crash risk associated with off-duty periods as long as 48 hours.” 70 FR 50017-50018. The agency also cited the arguments and research findings advanced by Elisa Braver of the University of Maryland School of Medicine who:

asserted that there is an absence of scientific evidence that the cumulative sleep deficits and fatigue incurred by working 60 hours can be remedied by having 34

³⁷ This study is not cited by the agency, but refers to A. McCartt *et al.*, *Study of Fatigue-Related Driving among Long-Distance Truck Drivers in New York State*, 1997, rev. 1998.

hours off duty. She said that the scientific evidence cited by the Agency in support of the restart is marred by small numbers, inapplicability to the driving population, and failure to study the effects of having 34 hours off after working according to the schedule permitted by the rule. As an example, Braver said that the study cited by O'Neill [O'Neill, T.R., *et al.* (1999)] featured small numbers of volunteers in driving simulators following a schedule unlike that of typical drivers who had 58 hours off between five-day work shifts.³⁸

Id. at 50018.

The Insurance Institute for Highway Safety also cited the baseline research design defects of the O'Neill *et al.* (1999) study. However, the FMCSA response to these studies is essentially to ignore the need to respond and, instead, to take refuge in a generalization that “the research on adequate recovery periods is somewhat limited . . .” *Id.* at 50021. In addition, the agency selectively accepts some studies that support its decision and rebuts or rejects any that are unfavorable to its policy choice.

For example, the well-known and often-cited research survey performed by Smiley and Heslegrave (1997) is repeatedly glossed without any clear acknowledgement that the conclusion of the authors was that a 36-hour restart provision was not acceptable for driver recovery from the effects of cumulative fatigue.³⁹ *Id.* at 50024. Similarly, the Insurance Institute’s citation of the study by Wylie *et al.* (1997) showing that drivers could not recover from cumulative fatigue with even 48 hours off-duty is rejected out of hand because of its small sample size. *Id.* Yet, despite small sample size, the 50 subjects in the Balkin *et al.* (2000) Walter Reed study used as the basis for the fatigue model in the RIA and the nominal 82 subjects (of an incomplete study conducted by Hanowski *et al.* (2005)), does not deter the agency from relying on these research efforts because they

³⁸ The FMCSA has already undermined its reliance on the O'Neill *et al.* study nearly 6 years ago by characterizing it in its November 1999 literature review as a study design [that] provided a relatively benign schedule that provided 10 consecutive hours off-duty and also allowed the drivers to sleep at times most compatible with circadian rhythms. The end-of-week recovery periods allowed three sleep periods that allowed sleep during optimal times – between midnight and 6:00 AM. The duty days also included three scheduled breaks. As the researchers note, the results of this study may not be generalizable to operations that are not day shifts, have shorter post-shift off-duty periods, have few or no breaks during the duty period, or vary from what the drivers is accustomed to in terms of circadian disruptions or longer-than-usual on-duty periods.

An Annotated Literature Review Relating to Proposed Revisions to the Hours of Service Regulation for Commercial Motor Vehicle Drivers, DOT-MC-99-129, November 1999, at 115-116.

³⁹ Even the agency’s mention of the Smiley and Heslegrave study in one location in the preamble of the 2005 final rule characterizes it as “their literature review regarding 36-hour recovery” without acknowledging that the authors concluded from their literature survey that a 36-hour recovery period was not adequate for commercial drivers to expunge sleep debt and recover performance. 70 FR 50024.

provide some support for the agency's foregone decisions. Moreover, under the cover of the agency's claim that "the current scientific evidence is limited," the FMCSA avoids taking the prudent course of requiring more time off at the end of a work week than is allowed under both the 2003 and 2005 final rules. Instead, the agency opts to be far more demanding on drivers than under the pre-2003 regulation and instead restricts off-duty "restart" time to a minimum of 34 hours. In addition, the agency cites the OOIDA survey of its member drivers that only 20 percent responded that they were getting more time at home as a result of the 2003 rule. This means that fully 80 percent of OOIDA drivers – the great majority – answered "No" – they are not getting home more often to rest and recover. *Id.* at 50025. The agency simply disregards the negative feedback from this survey on the claimed benefit of more home time under the 2003 regulation.

It is clear that the agency wants to justify the 34-hour restart provision because the economic benefits of cycling drivers back that much sooner into the longer working and driving hours allowed by the 2003 and 2005 final rules produce economic gains for the trucking industry. Additional time off-duty would spawn delays that are generated by a longer minimum restart provision that reduces driver productivity.⁴⁰ "[W]e can say that at least one-third of restarts are short enough to bring a productivity gain." RIA at 2-22. However, that policy choice is not supported by the research that the agency advances, and it is countered by other research showing that the 34 hours allowed as a minimum layover before a new tour of duty is inadequate to eliminate commercial driver fatigue accumulated from long working and driving hours over previous days. The agency needs to reconsider its decision to discount or ignore countervailing research that does not support its position.

VII. The Adequacy of Rest and Sleep Time Allotted under the Rule Should Be Reconsidered.

In the final rule, FMCSA approaches the topic of the minimum rest time needed to ensure adequate sleep with ample sleight-of-hand. The agency attempts to foster the acceptance of a variety of off-duty sleep times as "normal" in this final rule, especially in the preamble, that vary between a low of 6 hours on average achieved by drivers to the 8.5 hours, when split rest time in sleeper berths is taken, recommended by Mark Rosekind and apparently endorsed by the FMCSA.⁴¹ The FMCSA should remember that it is already on record in more than one instance over the history of this rulemaking,

⁴⁰ "Because they limit driving hours and require longer restart periods, the relative productivity loss caused by Options 3 and 4 are substantially greater than that for Option 2 in almost all cases. Also, in almost all cases, the impact of Option 3 is greater than that of Option 4, due to the longer restart required under Option 3." RIA at ES-3.

⁴¹ "Rosekind of Alertness Solutions concluded that translating these scientific results into operational practice would suggest that an 'anchor sleep opportunity' of 6.5 hours and another sleep opportunity of 2 hours would likely provide the minimum number of sleep hours needed to maintain a performance equivalent to one 8-hour sleep period." 70 FR 50027-50028.

beginning with the advance notice of proposed rulemaking in 1997, that drivers need a minimum of a full 8 hours of restorative sleep. For example, in the May 24, 2000, NPRM, the agency asserted that drivers should get “eight consecutive hours of uninterrupted sleep each day[,]” and that “to afford the driver an opportunity to obtain a minimum period of 8 hours to sleep, the research shows that the off-duty periods need to be increased.”⁴² 65 FR 25554.

In contrast, the agency picks and chooses various amounts of sleep throughout the preamble of this final rule, always defending each different number as being adequate for drivers to recover performance and expunge sleep debt. Here is a sampling of the agency’s shifting stance on the amount of daily sleep that truck drivers need:

- “The circadian friendliness of today’s rule is bolstered by the requirement for 10 consecutive hours off-duty. This is enough time to enable drivers to get the 7-8 hours of sleep most people need to maintain alertness and prevent the onset of cumulative fatigue.” 70 FR 49980.
- “While the Agency would like to see drivers obtain a sleep period between 7 to 8 hours per day to maximize driver alertness, the finding of 6.28 hours of sleep per night [in the Hanowski, *et al.* study] is within normal ranges consistent with a healthy lifestyle and is a vast improvement over previous sleep findings.”⁴³ *Id.* at 49983 .
- “Today’s rule provides for 10 hours of consecutive off-duty time, giving drivers the opportunity to obtain 7 to 8 hours of restorative sleep per day. Research on the implementation of the 2003 rule shows that drivers are sleeping 6.28 hours of verified sleep and this is within normal ranges consistent with a healthy lifestyle.” *Id.* at 49991, also *see, id.*, at 49993.
- “The 2003 rule and today’s final rule provide drivers an additional 2 hours off-duty creating a much improved opportunity for 7 or 8 hours of sleep.” *Id.* at 50011.
- “The research supports 6-8 hours of sleep on average, as having a positive impact upon a driver’s health.” Final Rule at 164. However, the FMCSA also asserts just prior to this statement that:
[T]he research overwhelmingly supports that on average humans require between 7 and 8 consecutive hours of sleep per day to restore performance. * * * Establishing a rule requiring less than the average would result in sleep restriction over time that would lead to increased

⁴² Also *see*, 68 FR 22456, 22469.

⁴³ As noted earlier, the Hanowski *et al.* study had a very small sample size, and the authors point out several major variables that were uncontrolled in the research effort so that, in the end, they cannot account for the amounts of sleep taken in relation to fatigue and performance.

fatigue and reduced performance, thus elevating crash risk and compromising safety. *Id.*

- And on the preceding page, the FMCSA favorably quotes Rosekind (1997) who “concluded that ‘scientific data are clear regarding the human physiological requirement for 8 hours of sleep to maintain performance and alertness’,” *id.* at 50015. On the same page the agency again cites the conclusion reached by several studies that “even a relatively small reduction in average nighttime sleep duration (i.e., approximately 6 hours of sleep) resulted in measurably decremented performance,” *id.*, as well as Mark Rosekind’s finding from other research that had been conducted, “that obtaining 2 hours less sleep than needed (for an average adult this equates to about 6 hours of sleep) produces a reduction in performance and alertness. The data showed that obtaining a total of 8 hours of sleep per 24-hour period is critical.” *Id.* at 50027.
- However, the agency lowers the bar even further: “Based on research that led to the 2003 rule, FMCSA knew that short sleep (sleep less than 6 hours) among drivers was a concern from both a safety and health perspective.” *Id.* at 50027.
- And on the same page there is a return to the position that “[t]o ensure that drivers are afforded the opportunity to obtain 7 to 8 hours of sleep, the rule must afford a period of time greater than the minimum required for sleep.” *Id.* Yet the agency in the immediately preceding pages has shown – and endorsed – the position that less than 7 hours of sleep *is* acceptable and that, indeed, even 6 hours of sleep is acceptable, despite its own rebuttal of that view at, *id.*, 50015.

It is clear from this review that the FMCSA has a shifting, contradictory view in the record of what is needed as the minimum amount of sleep for recovery from fatigue. That agency view varies from 8 hours of sleep, 7-8 hours of sleep, 6.28 hours of sleep, down to “6-8 hours of sleep,” *id.* at 50016, which the agency itself contradicts only one page earlier by emphasizing the findings of several studies that showed that 6 hours of sleep is insufficient for expunging sleep debt and restoring performance. *Id.* at 50015. If 6 hours of sleep are insufficient at one point in the preamble of the final rule (*id.*), then the average amount of sleep of 6.28 hours which the agency found to be sufficient based on the Hanowski *et al.* study – which is “approximately 6 hours of sleep,” *id.* at 50015 -- is clearly inadequate on its face.

VIII. The Agency Should Reconsider Its Decision to Allow CMV Drivers to Drive and Rest on a Non-Circadian, 21-Hour Rearward Rotating Shift Schedule

In the 2000 NPRM, the FMCSA argued strongly in several places in the preamble that truck drivers would benefit in reduced fatigue, improved performance and alertness, and elimination of accumulated sleep debt if their working and driving cycle adhered to a

fully circadian, 24-hour shift cycle of waking time and rest time. See, *e.g.*, 65 FR 25548, 25554-25556. The agency attempted to ensure this by a schedule for long-haul drivers that provided 10 hours off-duty, 12 hours of work, and 2 hours of breaks. It even attempted to regularize the layover period for truck drivers following the end of a tour of duty by ensuring that drivers would be able to benefit from nighttime sleep and daytime activity before beginning a new tour of duty by essentially penalizing motor carriers that released drivers after 11 PM at the end of a tour of duty. *Id.* at, *e.g.*, 25604. Overall, the FMCSA underpinned the entire HOS regime in the 2000 NPRM by attempting to ensure that drivers both during the work week and after its completion were aided in achieving alertness and eliminating accumulated sleep debt by a regulatory scheme that hewed closely to a circadian schedule. A circadian day for commercial drivers was, in fact, the centerpiece of the proposed rule.

However, this dedication to a circadian work day for truck drivers disappeared in the 2003 HOS final rule. That final rule markedly diverged from the NPRM in several major ways, but the most far-reaching change was the abandonment of a strict circadian schedule for drivers during a shift. The final rule, although it provided up to 3 hours of non-driving duty time in each shift, nevertheless did not require any non-driving shift hours to be taken and, instead, permitted drivers to use a backward rotating 21-hour shift schedule consisting of only 11 hours of consecutive driving followed by a minimum 10 hours of off-duty rest time. 68 FR 22456. The agency even went so far as to disagree with the American Trucking Association's (ATA) espousal of a circadian work day⁴⁴ to argue that "the strict 24-hour work/rest cycle would be ideal from a scientific viewpoint, but it is simply not practical and too inflexible to require of the industry. A strict 24-hour work/rest cycle would cause unavoidable impacts to motor carrier operations that the agency cannot justify from a safety or economic standpoint." *Id.* at 22468. "Moving towards a 24-hour work/rest cycle without requiring a rigid starting time could achieve safety benefits while causing less productivity disruptions to motor carrier operations than adopting the strict 24-hour work/rest cycle the NPRM and PATT proposed." *Id.*

In fact, these quotations show clearly that the agency retreated from the scientific research findings cited in more than one place in the 2000 NPRM and substituted a rationalization that had no support in the rulemaking record. Nowhere did the agency establish that drivers would in fact not be less fatigued and less well rested if they used a 21-hour shift rotation rather than a fully circadian 24-hour work/rest schedule. The agency itself marshaled the research both in the preamble of the NPRM itself as well as in its accompanying Annotated Literature Review, *op. cit.*, to show that schedules with less than a full circadian alternation of work with rest produced workers who got less rest and lower quality sleep, and also performed more poorly. The agency's argument that a 21-hour rotation was preferable to the 18-hour rotation was as gratuitous and unsupported

⁴⁴ Although it must be stressed that this ATA circadian schedule would be achieved by allowing drivers up to 14 hours of driving each day followed by a minimum 10 hours of off-duty rest time.

as its conclusory blandishment, *supra*, that departing from a 24-hour work/rest schedule “could achieve safety benefits.” Nowhere in the administrative record of this rulemaking did the agency show that the well-known decrements in the length and quality of sleep, and in worker performance with respect to mistakes, deaths, and injuries would be abated by a 21-hour schedule and that such a schedule would achieve the same safety benefits as a fully circadian, 24-hour schedule. The FMCSA simply pronounced that this 21-hour drive/rest shift cycle was just as acceptable in safety results as a 24-hour schedule, and proceeded on the basis of this circular argument to adopt the shorter, non-circadian schedule. No additional justification for continuing this major feature of the 2003 HOS regulation was provided by the FMCSA in the final rule.

Accordingly, the agency has failed to justify imposition of a non-circadian, rearward rotating 21-hour drive/rest schedule in the 2005 HOS final rule, and that major aspect of the new regulation should be reconsidered by the FMCSA.

IX. FMCSA Should Reconsider the Determination To Allow Sixteen Hour Work Days for Short Haul Truck Drivers

This final rule adopts a second 16-hour work day for short haul drivers who operate commercial motor vehicles without commercial driver licenses (CDLs) between 10,001 and 26,000 pounds gross vehicle weight if they operate within a 150 airmile radius⁴⁵ of their work reporting location to which they must return at the end of each work day. In addition, these short-haul drivers will not have to keep records of duty status, that is, logbooks entering time worked, driven, and off-duty over the course of both work days and a tour of duty. Employers will be required to maintain time records for 6 months. The agency provides no narrative explanation of what is entered on such time records. 70 FR 50033.

The agency attempts to justify the addition of a second 16-hour work day by appealing to a few studies supposedly evidencing driver tolerance of very long work days without any significant deterioration of performance or effects of fatigue. *Id.* at 49995, 50033-50035. The FMCSA also appeals to its analysis of short-haul operations within relatively circumscribed operating areas that shows such operations involve a relatively low proportion of driving in comparison with other work-related duties and tasks. *Id.* at 50033. The implication is that the amount of risk exposure per day and over a tour of duty has been considerably reduced and that this shows why short-haul drivers have relatively few fatigued-related fatal crashes.

Each of these arguments needs to be taken in turn. First, it must be emphasized that, although the agency is claiming that “longer workdays will not translate into longer

⁴⁵ An air mile is identical to a nautical mile, both equivalent to 1.15 statute miles. Therefore, an air mile is equal to 162.5 statute or land miles.

driving times in the short-haul environment, *id.* at 50033, and “short-haul drivers rarely, if ever, accumulate 11 hours of driving, regardless of work day length[,]” *id.*, these operations have not yet evolved to take advantage of the longer working hours provided by the final rule. The panoply of other permitted expanded working and driving hours are available to the short-haul trucking sector. *Id.* at 50032-50033. Petitioners have previously rebutted the agency’s unsupported belief that the 2004 snapshot of the trucking industry shows that the increased working and driving hours provided by the 2003 final rule will not be used. Similarly, the agency’s supposition that the future will be like the recent past for the short-haul sector, such as its package delivery operations, is an *ipse dixit* -- an utterly conclusory presumption without support in the record. Just as the RIA analysis of the use of the new, additional working and driving hours shows that the use, for example, of the 11th hour of driving is expected to increase in order to raise productivity benefits for the trucking industry, there is every reason to expect that the short-haul industry sector will evolve to expand operations over the greater number of working and driving hours first provided by the 2003 final rule and now further increased by the 2005 final rule.

Those hours, as stated openly by the FMCSA in the final rule, *id.* at 50033, consist of the same working and driving hours per shift and per tour of duty as those provided to other trucking industry sectors, save for the new sleeper berth exception. The short-haul sector may use an 11th hour of consecutive driving, may use the 34-hour minimum restart provision, and may use the maximum tours of duty limits of 60 hours in 7 days or 70 hours in 8 days. Through the use of the new “floating” work week triggered by the application of the 34-hour restart provision, this means that short-haul drivers may accrue **88 hours of work in 7 days** and **102 hours of work in 8 days**. This means that over 7 consecutive days, short-haul drivers could work **47 percent more** than permitted under the pre-2003 HOS rule, and over 8 consecutive days, they could work **46 percent more** than under the prior rule.

The potential impact of this dramatic increase in available hours on the health and safety of these drivers, who could eventually be tasked with working over 100 hours in an 8-day tour of duty, is waved off by the agency with the unsupported proclamation that the second 16-hour day will not be used; therefore, the agency’s cost-benefit analysis assumes that “the risk impacts of the second 16-hour day would be essentially zero.” RIA at 6-72. It is not logical for the agency to enshrine in amended regulations dramatically increased working and driving hours that it nevertheless insists will never be used by drivers and motor carriers.

If the second 16-hour day is not expected to be used, then why does the agency provide it? The FMCSA response in the preamble of this final rule is that “the Agency want to give this segment of the motor carrier industry as much flexibility as possible to structure their operations efficiently . . .” 70 FR 50033. The history of the industry clearly shows that if the additional time or increased flexibility is available, industry will make use of it to increase productivity. One has only to point to the sea change in HOS

regulation adopted by the Federal Highway Administration in 1962 that no longer tied the maximum number of driving and off-duty hours to a circadian day of 24 hours, but rather allowed drivers to constantly alternate 10 of driving with 8 hours off-duty along with no requirement to use any non-driving working hours. *See* 61 FR 57252, 57254 col. 2 (Nov. 5, 1996). The result was predictable: industry, especially the long-haul, over-the-road sector, began increasing productivity by more rapid delivery schedules covering more miles in fewer days – a practice that was key to the development over the last quarter-century of Just In Time delivery practices, especially following deregulation of the trucking industry at the start of the 1980s.

The agency cannot have it both ways. It cannot provide a second 16-hour work day which, on its face, is being adopted to allow the short-haul industry sector to expand working times twice in a work week to 16 hours and yet also claim that the day will not be used and, therefore, that the second 16-hour work day is safety neutral.

The agency also tries to justify the addition of a second 16-hour work day by appealing to a few studies that supposedly show that driving and working 16 and even 17 hours does not produce significant changes in driver fatigue and performance. All of these studies are inadequate for demonstrating that short-haul drivers can operate vehicles and work extremely long days without adverse impacts on their health and safety. Even the agency admits that two studies of short-haul drivers showed high levels of stress because these drivers regarded their work loads even under the working and driving hours permitted under the pre-2003 regulatory regime to be unreasonable. 70 FR 50033. In another study conducted by Williamson *et al.* (2000) of drivers in New Zealand, the agency characterizes this study to have found that “drivers could maintain their performance until about the 17th hour of wakefulness, after which performance capacity was sufficiently impaired to be a safety concern.” *Id.* But this study used a break of at least 24 hours before the start of the study’s 16-hour working and driving day, and the study of a 16-hour work day was a simulation and was not conducted on-road at all. In fact, the “simulation” involved drivers playing computer games. Moreover, the agency fails to report that the investigators found that “performance deteriorated significantly by the middle of the second 16-hour period. In fact, performance levels at this time were considerably poorer than the 0.05% BAC alcohol equivalence standard.”⁴⁶ Moreover, the drivers “tested” by playing computer games for 16 hours had an immediately previous, full 24-hour break. *Id.* It is clear that the impromptu demands of the short-haul sector of the industry, such as regional package delivery services, will often find it advantageous to schedule not only one 16-hour work day without a prior 24 hour break, but that drivers can be compelled to work the available second 16-hour work day two days in row if, for example, accelerated holiday package delivery demands must be met.

⁴⁶ A. Williamson, *et al.*, “Demonstration Project for Fatigue Management Programs in the Road Transport Industry: Summary of Findings,” Road Safety Research Report CR 192, Australian Department of Transport and Regional Services, 2000.

The Williamson *et al.* study also shows that successive days of exceedingly long working hours dramatically increased fatigue and that recovery was not possible in the short term, a finding also ignored by the FMCSA.

As for the FMCSA's reliance on the study by Massie *et al.* (1997) study, *Short-Haul Trucks and Driver Fatigue*, DTFH61-C-00038, Federal Highway Administration, Washington, D.C., 70 FR at 50034-50035, even the agency's own review of this study in its literature review for the 2000 NPRM⁴⁷ points out that the authors reviewed local service trucks within a 50-mile operating radius and found that they had a fatal crash involvement rate 1.8 times higher than over-the-road trucks, a fact not mentioned by the FMCSA. Moreover, the authors analyzed crash data for driver fatigue involvement and found that fatigue was not coded often as a crash contributing factor, as is the case with all PARs used as the basis for FARS judgments on the presence of driver fatigue. As a result, the Massie *et al.* study concluded that fatigue involvement was probably underreported. In any case, the control for trip distance for attempting to determine the presence of fatigue was **50 miles or less**, not the 150 air miles adopted by the FMCSA in this final rule for allowing short-haul drivers to work two 16-hour days each week.

The agency has no justification for allowing short-haul drivers to work between 88 and 102 hours over the course of a tour of duty and work two 16-hour days a week – which may be required back-to-back – on the basis of the arguments and research advanced in the preamble of this new HOS regulation. In fact, the agency's judgment should be to *withdraw* the use of the first 16-hour day permitted by the 2003 final rule.

X. Omission of Electronic On-Board Recorders From the Final Rule

Finally, Petitioners regard the agency's explanation of why it will continue to defer the potential adoption of electronic on-board recorders (EOBRs) to be another example of the FMCSA's long, well-documented history of dilatory action on this major safety topic.⁴⁸ 70 FR 50041. The 2003 and 2005 final rules permit truck drivers to work and drive far longer hours than allowed under the pre-2003 regulation, and the agency is

⁴⁷ "An Annotated Literature Review Relating to Proposed Revisions to the Hours-of-Service Regulation for Commercial Motor Vehicle Drivers," *op. cit.*, at 42-43.

⁴⁸ The rulemaking comments of Advocates for Highway and Auto Safety on the need for EOBRs (ANPRM, 69 FR 53386, September 1, 2004), sets forth this protracted rulemaking history of both the Federal Highway Administration and the Federal Motor Carrier Safety Administration repeatedly denying petitions for opening rulemaking and indulging delaying tactics in addressing this major area of need for motor carrier safety despite prompting by Congress, the National Transportation Safety Board, and the Inspector General of the U.S. Department of Transportation. Comments of Advocates for Highway and Auto Safety, Docket No. FMCSA-2004-18940-310 (Nov. 30, 2004). *See also* comments of Public Citizen, Docket No. FMCSA-2004-18940-317 (dated Nov. 30, 2004). Both sets of comments are incorporated by reference in this petition.

well aware of the documented, widespread falsification of log books entries by commercial drivers seeking to conceal their practices of exceeding maximum permitted on-duty and driving hours in each shift and over multi-day tours of duty, as well as illegally reducing their off-duty rest time below the minimum required in HOS regulations.⁴⁹ Now that the agency has permitted even more hours of driving and working and less rest each week by allowing drivers to use only a minimum 34-hour restart layover that creates a more rapid cycling of work weeks than under the pre-2003 rule, it is more crucial than ever for the FMCSA to ensure that drivers do not become sleep-deprived and fatigued by violating these more extreme limits on driving, working, and off-duty hours that have been allowed by the instant final rule.

Accordingly, the FMCSA needs to accelerate the rulemaking process to adopt EOBRs to ensure that drivers do not exceed the new, higher driving hour limits. The FMCSA has already unconscionably delayed the rulemaking process by first issuing an advance notice of proposed rulemaking with no stated calendar of when the agency will actually issue a proposed rule. The agency's statement in this rulemaking is simply not an acceptable engagement of this need to propose adoption of EOBRs as soon as possible.

XI. Procedural Issues

During the course of the rulemaking that resulted in the 2005 final rule, FMCSA committed procedural errors that should be reconsidered by the agency.

A. FMCSA's Flawed Procedural Approach To This Rulemaking Proceeding

FMCSA chose to begin this rulemaking proceeding by proposing the same 2003 final rule that had been the subject of an adverse court decision and which was then vacated in its entirety. *Public Citizen et al. v. FMCSA*, 374 F.2d 1209 (2004). By proceeding in this manner, the agency deprived the public of any real opportunity to engage in and comment on the agency's intended rulemaking proposal and final rule.

Since the 2003 final rule had been legally rendered null and void by the federal court, the public at the very least should have been presented with the pre-2003 HOS rule as the baseline for initial public comments. If any rule was to be used as the baseline for comment, the agency was legally bound to make its starting point from the pre-2003 regulation, the rule that was and is still in effect for motor coach operations.

FMCSA, however, stated that it was not actually proposing the vacated 2003 final rule, but that in order "[t]o facilitate discussion, the agency is putting forward the 2003

⁴⁹ See, *supra*, footnote 30.

rule as the ‘proposal’ on which public comments are sought.” 70 FR 3339 (Jan. 4, 2005). Clearly, this was not a proposed rule because the agency merely restated the contents of the vacated 2003 rule and sought information about how the 2003 rule might be altered or justified to meet the deficiencies pointed out in the court decision. Moreover, the agency was conducting ongoing research and analysis of the issues raised regarding that rule. In fact, the agency was gathering information and conducting analysis but, as yet, had made no determinations about what, if any, changes would be made. The public was given no indication whether the agency would consider making major or only *de minimis* changes from the 2003 final rule when that rule was re-invoked as the basis for the January 24, 2005, notice. In this light, the January 2005 notice was more in the nature of an advance notice of proposed rulemaking rather than a specific proposed rule. The agency itself points out in the preamble to the final rule, “[a]s the quotation marks around the ‘proposal’ indicate, the 2003 rule was merely the starting point of a research and rulemaking program to determine whether that rule could be reconciled with the Public Citizen decision.” 70 FR 50043.

This “starting point” could not also turn out to be the ending point of the rulemaking process. FMCSA was legally obligated to provide the public notice and an opportunity for comment on the rule it ultimately determined to proceed with, and to share its reasoning. Once the agency had sifted through information and made determinations regarding the shape the future HOS regulation should take, the agency was bound to present that proposal to the public and allow an opportunity for further comment. The agency in fact provided the public only one opportunity to comment on a “proposal” which even the agency acknowledges was merely a place-holder that was not intended to be the end result of the agency’s rulemaking process. The agency then proceeded to make determinations about what should be in the new HOS, but those determinations and the rationale for those determinations were first presented to the public in this final rule, without prior public notice or an opportunity for public comment. This procedure violates the fundamental protections afforded in the Administrative Procedure Act (APA), 5 U.S.C. § 553.

As it turned out, the 2005 final rule makes two major changes to the previous 2003 final rule by changing the regulation regarding short-haul drivers and sleeper berth usage. However, because these specific changes were never presented to the public until the issuance of the final rule, the public had no opportunity to comment on those specific changes. As can be seen in this petition, petitioners would have opposed both those changes had they been offered as adopted in the 2005 final rule for public comment prior to adoption. Equally important, the agency did not provide the public an opportunity for comment regarding its reasons and explanation for retaining critical aspects of the 2003 final rule in the 2005 final rule. Prior to the issuance of this final rule, the agency afforded no opportunity to evaluate or refute the agency’s basis for determining that major portions of the 2003 final rule, including the 11-hour limit on consecutive hours of driving per shift and the minimum 34-hour restart, should be retained. This truncated proceeding violates basic principles of fairness and due process under which the agency

is required to permit the public to comment on regulatory proposals. Such violation is especially egregious where, as in the present circumstances, the rulemaking is highly controversial, the previous and nearly identical rule has been overturned in federal court, and the agency has determined that the rulemaking is significant from an economic standpoint. 70 FR 3351 (“this rulemaking constitutes an economically significant regulatory action under Executive Order 12866”).

The agency asserts that this un-APA style procedure was necessary due to the one-year time limit for regulatory action set by congressional action. Section 7(f) of the Surface Transportation Extension Act of 2004, Part V, Pub. L. 108-310 (Sept. 30, 2004). This position is belied by the fact that the agency took three (3) months, one fourth of the allotted year, to draft and issue the January, 2005 place-holder notice. The preamble of that notice runs just 10 pages in the Federal register and essentially reviews the 2003 final rule and poses generalized questions regarding that rule, requests information on HOS issues and asks for public comment. Nothing in that notice necessitated the use of so much time that a true notice of proposed rulemaking could not be included in the agency’s rulemaking schedule. Despite the fact that the 2003 final rule was maintained in place for one year, FMCSA was obligated at some point to afford the public an opportunity to comment on the actual proposal the agency intended to present for ultimate adoption in this final rule.

On reconsideration, FMCSA should undertake a new regulatory impact analysis that is published for public comment.

B. The Administrative Record

Petitioners also complain regarding FMCSA’s failure to provide a complete record for the public to review in two important respects.

First, the agency decided to place abstracts in lieu of complete copies of studies and research reports relied on by the agency in the electronic rulemaking docket. Despite FMCSA’s assertion that the “full versions of the reports were readily available in the Library of Congress, the National library of Medicine in Bethesda, and other sources such as university libraries,” 70 FR 50044, many of those research reports are only available for a substantial fee through pay-for-use or subscription services and would require a large expenditure of funds to collect all the sources cited in the abstracts. This placed a significant burden on the public, including the public interest organizations in this petition, to search for and pay to obtain documents and materials that the agency relied on in its rulemaking proceeding. All such documents should be made reasonably available to the public at no cost as part of the rulemaking proceeding. In response to complaints that such a process deprived the public of an opportunity to participate on an equal footing with the FMCSA in the regulatory process, “FMCSA [] created a reading room where the copyrighted materials referred to in the NPRM may be examined.” *Id.* However, the public was not notified of the availability of this material at the agency

until the publication of the 2005 final rule on August 25, 2005. No prior notice to the general public was given.

Counsel for Petitioner Advocates for Highway and Auto Safety contacted FMCSA's HOS Team in February, 2005, before the close of the public docket, regarding the agency's use of abstracts but received no response from agency personnel until May 2005. Counsel for Petitioner Advocates for Highway and Auto Safety was later notified by letter that 23 studies for which abstracts appeared in the electronic docket were available in a public reading room. That notification, however, was provided in a letter received on May 1, 2005, more than 50 days after the closing date for public comment and more than 2 months after counsel for Petitioner Advocates for Highway and Auto Safety had originally contacted the agency with an inquiry regarding those documents. Letter dated April 29, 2005, from Thomas L. Yager, FMCSA HOS Team, to Henry M. Jasny, General Counsel, Advocates for Highway and Auto Safety.

Second, FMCSA did not place a number of important studies that the agency relies on in the final rule in the public docket until very late in the rulemaking process. For example, it was not until August 10, 2005, that the literature review conducted by the National Academy of Sciences Transportation Research Board (TRB), with which FMCSA had contracted in order to "review, first, the literature published between 1975 and the present concerning the health implications of the hours-of-service regulations for CMV drivers," 68 FR 3341, was entered into the docket. Docket No. FMCSA-2004-19608-2084. In addition, the study by Hanowski, *et al.*, was not placed in the docket until August 16, 2005 (Docket No. FMCSA-2004-19608-2089). The final rule was formally signed by the FMCSA Administrator and issued on August 16, 2005 (70 FR 50073, Aug. 25, 2005). The agency did not provide the public with copies of other important studies the agency relied until after the 2005 final rule was issued, including the second interim report of the study by Jovanis, *et al.*, (Interim Report II) which was placed in the docket on August 18, 2005 (Docket No. FMCSA-2004-19608-2091), and the two versions of the study by Campbell, K.L., which were placed in the docket on August 25, 2005 (Docket No. FMCSA-2004-19608-2115 (Feb. 2005 Draft Report)) (Docket No. FMCSA-2004-19608-2116 (Aug. 2005 Final Report)). Finally, the agency's rule relies on critical analysis included in the RIA, a document that is dated August 15, 2005, and which was not placed in the public docket until August 19, 2005 (Docket No. FMCSA-2004-19608-2094). As a result, the public was unaware of the existence of these documents, had no opportunity to review, evaluate, or comment on their contents in advance of issuance of the final rule.

SUBMITTED BY:

Judith L. Stone
President
Advocates for Highway and Auto Safety

LaMont Byrd
Director, Safety and Health Department
International Brotherhood of Teamsters

Joan Claybrook
President
Public Citizen

John Lannen
Executive Director
Citizens for Reliable and Safe Highways

Andrew McGuire,
Executive Director
Trauma Foundation

Daphne Izer
President and Founder
Parents Against Tired Truckers