

Office of Management and Budget. For this reason, this action is also not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001). This action merely approves state law as meeting Federal requirements and imposes no additional requirements beyond those imposed by state law. Accordingly, the Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). Because this rule approves pre-existing requirements under state law and does not impose any additional enforceable duty beyond that required by state law, it does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4).

This rule also does not have tribal implications because it will not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes, as specified by Executive Order 13175 (65 FR 67249, November 9, 2000). This action also does not have Federalism implications because it does not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999), because it merely approves a state rule implementing a federal standard, and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act. This rule also is not subject to Executive Order 13045 "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), because it is not economically significant.

In reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. In this context, in the absence of a prior existing requirement for the State to use voluntary consensus standards (VCS), EPA has no authority to disapprove a SIP submission for failure to use VCS. It would thus be inconsistent with applicable law for EPA, when it reviews a SIP submission, to use VCS in place of a SIP submission that otherwise satisfies the provisions of

the Clean Air Act. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply. This rule does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: January 12, 2005.

Robert W. Varney,

Regional Administrator, EPA New England.

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DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

49 CFR Parts 385, 390 and 395

[Docket No. FMCSA-2004-19608; formerly FMCSA-1997-2350]

RIN-2126-AA90

Hours of Service of Drivers

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice of proposed rulemaking (NPRM); request for comments.

SUMMARY: FMCSA is reviewing and reconsidering the regulations on hours of service of drivers published on April 28, 2003 (68 FR 22456) and amended on September 30, 2003 (68 FR 56208). The regulations were vacated by the U.S. Court of Appeals for the District of Columbia Circuit on July 16, 2004 (*Public Citizen et al. v. Federal Motor Carrier Safety Administration*, 374 F.3d 1209). Congress subsequently provided that the 2003 regulations will remain in effect until the effective date of a new final rule addressing the issues raised by the court or September 30, 2005, whichever occurs first (Section 7(f) of the Surface Transportation Extension Act of 2004, Part V). FMCSA is reconsidering the 2003 regulations to determine what changes may be necessary to be consistent with the holdings and *dicta* of the *Public Citizen* decision. In order to allow effective public participation in the process before the statutory deadline, FMCSA is

publishing this NPRM concurrently with its ongoing research and analysis of the issues raised by the court. To facilitate discussion, the agency is putting forward the 2003 rule as the "proposal" on which public comments are sought. This NPRM, however, asks the public to comment on what changes to that rule, if any, are necessary to respond to the concerns raised by the court, and to provide data or studies that would support changes to, or continued use of, the 2003 rule. The NPRM includes specific information on a variety of topics and specific questions for comment. FMCSA is not considering changes to the hours-of-service regulations applicable to drivers and operators of *passenger-carrying* commercial motor vehicles (CMVs).

DATES: Comments must be received by March 10, 2005.

ADDRESSES: You may submit comments identified by DOT DMS Docket Number FMCSA-2004-19608 by any of the following methods. Do not submit the same comments by more than one method. However, in order to allow effective public participation in this rulemaking before the statutory deadline, we encourage use of the web site that is listed first below. It will provide the most efficient and timely method of receiving and processing your comments.

- Web site: <http://dms.dot.gov>:

Follow the instructions for submitting comments on the DOT electronic site.

- Fax: 1-202-493-2251.

- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001.

- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the online instructions for submitting comments.

Instructions: All submissions must include the agency name and docket number (FMCSA-2004-19608) or Regulatory Identification Number (RIN) for this rulemaking (RIN-2126-AA90). Note that all comments received will be posted without change to <http://dms.dot.gov>, including any personal information provided. Please see the Privacy Act heading for further information. If addressing a specific request for comments in this NPRM, *please clearly identify the related "request number(s)"* for each topic addressed in your comments. Further

important guidance for commenters is contained within individual sections of this NPRM.

Docket: For access to the docket to read background documents or comments received, go to <http://dms.dot.gov> at any time or to Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Privacy Act: Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477) or you may visit <http://dms.dot.gov>.

Comments received after the comment closing date will be included in the docket and we will consider late comments to the extent practicable. FMCSA may, however, issue a final rule at any time after the close of the comment period.

FOR FURTHER INFORMATION CONTACT: Mr. Tom Yager, Hours-of-Service Team, Federal Motor Carrier Safety Administration, 202-366-1425.

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A. Legal Basis for the Rulemaking

This rulemaking is based on the authority of the Motor Carrier Act of 1935 and the Motor Carrier Safety Act of 1984.

The Motor Carrier Act of 1935, as amended, provides that “[t]he Secretary of Transportation may prescribe requirements for: (1) Qualifications and maximum hours of service of employees of, and safety of operation and equipment of, a motor carrier; and (2) qualifications and maximum hours of service of employees of, and standards of equipment of, a motor private carrier, when needed to promote safety of operation” (49 U.S.C. 31502(b)).

For reasons explained in more detail below, this NPRM raises for reconsideration the hours-of-service regulations applicable to drivers and operators of property-carrying CMVs, which were promulgated by FMCSA on April 28, 2003 (68 FR 22456) and amended on September 30, 2003 (68 FR 56208). The agency may ultimately modify those regulations as a result of this review. The hours-of-service regulations deal directly with the “maximum hours of service of employees of * * * a motor carrier (section 31502(b)(1)) and the “maximum hours of service of employees of * * * a motor private carrier” (section 31502(b)(2)). The adoption and enforcement of such rules were specifically authorized by the Motor Carrier Act of 1935. This NPRM rests squarely on that authority.

The Motor Carrier Safety Act of 1984 provides concurrent authority to regulate drivers, motor carriers, and vehicle equipment. It requires the Secretary of Transportation to “prescribe regulations on commercial motor vehicle safety. The regulations shall prescribe minimum safety standards for commercial motor vehicles. At a minimum, the regulations shall ensure that: (1) Commercial motor vehicles are maintained, equipped, loaded, and operated safely; (2) the responsibilities imposed on operators of commercial motor vehicles do not impair their ability to operate the vehicles safely; (3) the physical condition of operators of commercial

motor vehicles is adequate to enable them to operate the vehicles safely; and (4) the operation of commercial motor vehicles does not have a deleterious effect on the physical condition of the operators” (49 U.S.C. 31136(a)).

This NPRM deals with the hours of service of drivers. It is based primarily on the requirements of section 31136(a)(2) and (a)(4), and secondarily on section 31136(a)(1) and (a)(3). The fundamental purpose of the hours-of-service regulations is to ensure that driving requirements and other employment obligations imposed on CMV operators “do not impair [the drivers’] ability to operate the vehicles safely” (section 31136(a)(2)). Broadly speaking, this NPRM is seeking public comment on whether the April 2003, final rule achieves that goal through a combination of three provisions (though others also play a role) which require drivers to take 10 consecutive hours off duty before driving a CMV, limit driving time after 10 hours off duty to 11 hours, and prohibit driving after the 14th hour after coming on duty following 10 hours off duty.

FMCSA also seeks comment on whether that same combination of provisions addresses some of the requirements of section 31136(a)(4) by minimizing the “deleterious effect[s]” of sleep deprivation and cumulative fatigue on “the physical condition” of CMV drivers, and thus reducing the risk of fatigue-related accidents. This NPRM also requests public comments and information about other possible “deleterious effect[s]” associated with hours of service and with the operation of CMVs, which the agency is considering in the course of this rulemaking. While section 31136(a)(1) deals primarily with vehicle equipment and loading (now codified at 49 CFR part 393 and § 392.9), it also requires that CMVs be “operated safely,” which encompasses both the vehicle and the driver. Finally, section 31136(a)(3) requires regulations which ensure that “the physical condition” of CMV drivers enables them to drive safely. Although that subsection requires the agency to adopt general physical qualification standards (now codified at 49 CFR 391.41(b)), a CMV driver’s “physical condition” may be affected by “the responsibilities imposed” on him/her and by “deleterious effect[s]” associated with the operation of large CMVs. To enable FMCSA to evaluate the need for any changes to the April 2003, hours-of-service regulations, this NPRM requests comments and information on all of these issues as they relate to the hours-of-service regulations.

Before prescribing any regulations, however, FMCSA must also consider the “costs and benefits” of its proposal (49 U.S.C. 31136(c)(2)(A)). For that reason, this NPRM seeks comment on the economic effects of this proposal as well.

B. Background Information

B.1. History of the Hours-of-Service Rule

The Interstate Commerce Commission (ICC) promulgated the first Federal hours-of-service regulations in the late 1930s. The rules were based on the Motor Carrier Act of 1935. The regulations remained largely unchanged from 1940 until 2003, except for a significant amendment in 1962. Prior to 1962, driver hours-of-service regulations were based on a 24-hour period from noon to noon or midnight to midnight. A driver could be on duty no more than 15 hours in a 24-consecutive-hour period. In 1962, among other rule changes, the 24-hour cycle was removed and replaced by minimum off-duty periods. A driver could “restart” the calculation of his or her driving and on-duty limitations after any period of 8 or more hours off duty.

Section 408 of the ICC Termination Act of 1995 (ICCTA) (Pub. L. 104–88, 109 Stat. 803, at 958) required the Federal Highway Administration (FHWA) to conduct rulemaking “dealing with a variety of fatigue-related issues pertaining to commercial motor vehicle safety.” In response, FHWA published an advance notice of proposed rulemaking (ANPRM) on November 5, 1996 (61 FR 57252). FMCSA was established as a separate agency on January 1, 2000. At that time, responsibility to promulgate CMV regulations was transferred from FHWA to FMCSA, which published an hours-of-service NPRM on May 2, 2000 (65 FR 25540) and a final rule on April 28, 2003 (68 FR 22456). Technical amendments to the final rule were published on September 30, 2003 (68 FR 56208). Motor carriers and drivers were required to comply with the final rule starting on January 4, 2004.

FMCSA’s 2003 final rule did not change any hours-of-service requirements for motor carriers and drivers operating *passenger-carrying* vehicles. They are required to continue complying with the hours-of-service rules existing before the 2003 final rule (see 68 FR 22461–22462). Changes in hours-of-service provisions in the new rule applied only to motor carriers and drivers operating *property-carrying* vehicles. Compared to the previous regulations, the new rule: (1) Required drivers to take 10, instead of 8,

consecutive hours off duty (except when using sleeper berths); (2) retained the prior prohibition on driving after 60 hours on duty in 7 consecutive days or 70 hours in 8 consecutive days; (3) increased allowable driving time from 10 hours to 11 hours; and (4) replaced the so-called 15-hour rule (which prohibited drivers from driving after being on duty more than 15 hours, not including intervening off-duty time) with a 14-hour rule (which prohibited driving after the 14th hour after the driver came on duty, with no extensions for off-duty time). Additionally, FMCSA allowed drivers to “restart” the calculations for the 60- and 70-hour limits by taking 34 consecutive hours off duty. Based on the data and research available at the time, FMCSA was convinced that these new rules constitute a significant improvement in the hours-of-service regulations compared to the rules they replaced, by providing drivers with better opportunities to obtain restorative sleep, thereby reducing the incidence of crashes wholly or partially attributable to drowsiness or fatigue.

On June 12, 2003, Public Citizen, Citizens for Reliable and Safe Highways (CRASH) and Parents Against Tired Truckers (PATT) filed a petition to review the new hours-of-service rule with the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit). On July 16, 2004, the D.C. Circuit issued an opinion holding “that the rule is arbitrary and capricious [under the Administrative Procedure Act] because the agency failed to consider the impact of the rules on the health of drivers, a factor the agency must consider under its organic statute. Because the agency has wholly failed to comply with this specific statutory requirement [i.e., 49 U.S.C. 31136(a)(4)], this single objection from petitioners is sufficient to establish an arbitrary-and-capricious decision requiring vacatur¹ of the rule.” *Public Citizen et al. v. Federal Motor Carrier Safety Administration*, 374 F.3d 1209, at 1216. The court said that “[t]he FMCSA points to nothing in the agency’s extensive deliberations establishing that it considered the statutorily mandated factor of drivers’ health in the slightest.” *Id.* Although FMCSA argued that the effect of driver health on vehicle safety had “permeated the entire rulemaking process,” the court said that “[u]nder the statute, vehicle safety is a distinct factor the agency must consider, so considering the effect of driver health on safety cannot be equal to considering

the impact on the physical condition of the operators. * * * It may be the case, for example, that driving for extended periods of time and sleep deprivation cause drivers long-term back problems, or harm drivers’ immune systems. The agency may of course think that these and other effects on drivers are not problematic (or are outweighed by other considerations, like cost), but if so it was incumbent on it to say so in the rule and to explain why. Its failure to do so, standing alone, requires us to vacate the entire rule as arbitrary and capricious * * *.” *Public Citizen* at 1217.

The court also found fault with other aspects of the final rule and in *dicta* stated that (1) FMCSA’s justification for increasing driving time from 10 to 11 hours (i.e., more off-duty time and a shorter 14-hour driving window compensate for the additional driving time) may be legally insufficient because the agency failed to adequately demonstrate that other provisions of the rule offset the increase and failed to take into account the fatigue effects of “time on task” in the context of longer weekly on-duty periods allowed by the 34-hour restart; (2) the justification for allowing drivers of CMVs equipped with sleeper berths to split their 10-hour off-duty period into two separate periods was probably arbitrary and capricious, since FMCSA itself asserted that drivers need an opportunity for eight hours of uninterrupted sleep each night; (3) the agency’s failure to collect and analyze data on the costs and benefits of requiring electronic on-board recording devices (EOBRs) probably failed to meet the requirements of section 408 of the ICC Termination Act, which requires FMCSA to “deal with” EOBRs; and (4) the agency’s explanation of the 34-hour restart provision did not address or justify increases in the maximum weekly driver hours permitted by that provision.

At the end of August 2004, FMCSA modified an existing contract with the Transportation Research Board (TRB) of the National Academy of Sciences. The modification requires TRB to review, first, the literature published between 1975 and the present concerning the health implications of the hours-of-service regulations for CMV drivers, and, second, the literature relating to CMV drivers’ hours of service and fatigue from 1995 to the present. The review is expected to be complete by early 2005. All pertinent information will be made available in the public docket for this rulemaking.

On September 1, 2004, FMCSA published an ANPRM requesting information about factors the agency should consider in developing

¹ Vacatur: An order of a court vacating (voiding or annulling) a legal proceeding.

performance specifications for EOBRs. As the agency said in the preamble to that document, “FMCSA is attempting to evaluate the suitability of EOBRs to demonstrate compliance with the enforcement of the hours-of-service regulations, which in turn will have major implications for the welfare of drivers and the safe operation of commercial motor vehicles.” The ANPRM asked for comments and information, both on technical questions relating to EOBRs, and about the potential costs and benefits of such devices.

On September 30, 2004, the President signed the Surface Transportation Extension Act of 2004, Part V (Public Law 108–310, 118 Stat. 1144). Section 7(f) of the Act provides that “[t]he hours-of-service regulations applicable to property-carrying commercial drivers contained in the Final Rule published on April 28, 2003 (68 FR 22456–22517), as amended on September 30, 2003 (68 FR 56208–56212), and made applicable to motor carriers and drivers on January 4, 2004, shall be in effect until the earlier of: (1) the effective date of a new final rule addressing the issues raised by the July 16, 2004, decision of the United States Court of Appeals for the District of Columbia in *Public Citizen, et al. v. Federal Motor Carrier Safety Administration* (No. 03–1165); or (2) September 30, 2005.” (118 Stat. 1144, at 1154).

B.2. Premise of the 2003 Hours-of-Service Rule

The premise of the current hours-of-service rule is that safety and driver health related to the operation of a CMV will be improved by regulations moving drivers toward a 24-hour work cycle and providing drivers with sufficient time off to obtain eight hours sleep, while allowing carriers flexibilities in meeting schedule demands. There is general agreement among sleep researchers and industry participants that the hours-of-service rules should build on the foundation of a 24-hour day. Studies performed in laboratory settings, as well as studies assessing operational situations, have explored the relationships between the sleep obtained and subsequent performance. (Dinges, D.F., & Kribs, N.B., “Performing While Sleepy: Effects of Experimental-Induced Sleepiness” (1991); Bonnet, M.H., & Arrand, D.L., “We are Chronically Sleep Deprived” (1995); Belenky, G., *et al.*, “The Effects of Sleep Deprivation on Performance During Continuous Combat Operations” (1994); Dinges, D.F., *et al.*, “Cumulative Sleepiness, Mood Disturbances, and Psychomotor Vigilance Performance

Decrements During a Week of Sleep Restricted to 4–5 Hours Per Night” (1997); Pilcher, J.J., & Hufcutt, A.I., “Effects of Sleep Deprivation on Performance: A Meta-Analysis” (1996); and Belenky, G., *et al.*, “Effects of Continuation Operations on Soldier and Unit Performance: Review of the Literature and Strategies for Sustaining the Soldier” (1987)). The results of these studies can be summarized simply: a person who is sleepy is more prone to perform poorly on tasks requiring vigilance, quick reaction time, and decision-making than a person who is alert. The scientific basis for proposing daily restrictions is that an individual experiencing multiple periods of insufficient sleep quantity or quality incurs a cumulative sleep debt leading to increased levels of fatigue. The current rule permits a maximum of 11 hours of cumulative driving time, an increase of one hour from the previous rule. This current rule is, however, more restrictive in that it does not, as did the previous rule, permit a driver to extend on-duty time by subtracting breaks and waiting time from the on-duty time calculation. The 2003 rule reconsidered here adopted a number of provisions that combine to enhance highway safety and the health of CMV drivers as related to the operation of a CMV. The rule increased by two hours (from 8 to 10) the amount of off-duty time drivers must take between shifts and reduced the window in which driving can occur by one hour (from 15 to 14). Because the rule also eliminated a loophole in the previous rule permitting truckers to extend the 15-hour limit by taking breaks of any length, the driving “window” was actually shortened by more than one hour. Since these safety measures gave drivers substantially more opportunity to obtain restorative sleep, the agency concluded that a one-hour increase in driving time (from 10 to 11 hours) would not compromise the safe operation of CMVs or the health of drivers related to the hours-of-service regulations. A 14-hour work shift combined with a 10-hour off-duty period allows drivers to work in a 24-hour cycle, in step with the normal 24-hour circadian² rhythms. The agency retained the previous prohibition on driving after 60 hours on duty in 7 consecutive days, or 70 hours in 8 days, but it allowed drivers to restart the 60/70-hour calculation after taking 34 consecutive hours off duty. This gave drivers an opportunity to take two full 8-hour sleep periods and to return to

² Circadian rhythms: Biological functions or activities naturally occurring in approximately 24-hour cycles.

duty close to their previous starting times, thus helping to maintain their 24-hour circadian rhythms. The agency retained the rule permitting truckers to split their required off-duty time into two periods in a sleeper berth, neither of which could be less than two hours. Total sleeper-berth time, however, was increased from 8 to 10 hours. Finally, the agency declined to adopt a rule that would have required electronic on-board recording devices in all long-haul vehicles because both costs and benefits were unknown at the time.

C. Purpose of This Rulemaking

This rulemaking is necessary to develop hours-of-service regulations to replace those vacated by the Court. The vacated rule remains in effect until replaced or until September 30, 2005, whichever occurs first. This NPRM seeks public comment on what changes, if any, should be made to the April 2003 final rule to address the concerns raised by the D.C. Circuit, as outlined below. FMCSA’s review of the literature on driver health and the various hours-of-service issues discussed by the Court will help the agency determine whether the 2003 final rule should be changed. The hours-of-service regulations for drivers of *passenger-carrying* CMVs, *i.e.*, the rules previously applicable to the entire motor carrier industry, were not changed by the 2003 final rule and, consequently, were not at issue in *Public Citizen*. Therefore, the agency is neither requesting comment on, nor proposing to change, the motorcoach regulations at this time.

D. Guidance for Commenters

See the “Instructions” subsection early in this NPRM for specific methods of submitting comments. When you are addressing a specific request for comments in this NPRM, *please clearly identify the related “request number(s)”* for each topic addressed in your comments.

- FMCSA requests comments on the alternatives and issues presented in this NPRM. Commenters are also welcome to present other alternatives or raise additional issues directly related to the hours-of-service regulations.

- Commenters should address the incremental, direct impact of any proposed changes in hours-of-service requirements on driver health, the safe operation of CMVs, and economic factors. In other words, for any aspect of the hours-of-service rule being commented upon, please address the impact any *change* would have or has had on driver health, the safe operation of CMVs, and economic factors. Only issues directly related to the hours-of-

service regulations and the operation of a CMV are being considered in this rulemaking.

- Whenever possible, commenters should address the relationship of the subject commented upon to other aspects of hours-of-service requirements. For example, a recommendation to change the current 11-hour maximum driving time to some other driving time should discuss this in the context of any other changes being suggested to the 14-hour duty period or minimum 10-hours off-duty requirement, and, if so, how the combination of these factors impacts driver health, the safe operation of CMVs, and economic factors.

- Commenters are requested to include a clear rationale for any recommendations offered, along with documentation and data to support the recommendation.

- Specific references to scientific studies supporting a recommendation are also requested.

- For motor carriers and drivers, please provide information on your current operations, such as (a) Whether your primary operations are short-haul (*i.e.*, operations limited to 150 miles or less, with drivers typically spending each night at home) or long haul, (b) whether you are a private or for-hire motor carrier (or drive for one), (c) whether you are a truckload or less-than-truckload motor carrier (or drive for one) and (d) the commodity or commodities you most frequently haul.

E. Driver Health and Safety Relationships

The D.C. Circuit held in *Public Citizen* that FMCSA failed to consider the possibly deleterious effect of the 2003 hours-of-service rule on the physical condition of drivers, as required by 49 U.S.C. 31136(a)(4). This NPRM seeks information on that issue. The court in *dicta* also addressed several safety issues. Health and safety issues, while treated separately in the Motor Carrier Safety Act of 1984, are inextricably related. Any post-1984 changes to the hours-of-service regulations must ensure that driving a CMV does not harm drivers. Conversely, the physical condition of drivers can have a direct impact on highway safety, though all health problems do not have equally immediate effects. The 2003 final rule addressed the impacts of changes to the hours-of-service rules, but FMCSA is again inviting the public to comment on safety and driver health issues related to changes in the hours-of-service rule and the operation of a CMV.

Since publication of the 2003 final rule, the literature and studies on driver safety and health have expanded and evolved. In addition to any studies and reports referenced in the May 2000 NPRM, the April 2003 final rule, and in this NPRM, FMCSA is continuing to study emerging data and information on these related issues. The agency will file in the docket (FMCSA-2004-19608) a copy or summary of any study or report that is being considered in this rulemaking and has not previously been referenced.

FMCSA requests comments on the relationships between driver health and safety generally, but also between the net effect of the changes produced by the 2003 hours-of-service rule and health and safety.

Background

Scientific research has made important contributions to the development and assessment of regulatory proposals. A 1941 empirical study of human fatigue and stress in a workplace environment was completed under the direction of the U.S. Public Health Service to support the ICC's initial activity in hours-of-service regulations. Legislative and regulatory history, however, also show many examples of "common sense" proposals that are now seen as having had a scientific basis. One example was the ICC's original regulatory proposal. It limited CMV drivers to 12 hours of on-duty time (driving or not driving) in a 15-hour duty period, allowing 3 hours for breaks. The ICC rule required motor carriers to provide drivers 9 consecutive hours off duty—a schedule that would have maintained circadian rhythms. This provided a 15-hour duty period and 9-consecutive-hour minimum off-duty period, similar to the 14-hour duty period and 10-consecutive-hour off-duty periods of the current rule.

In developing its May 2000 proposed rulemaking, FMCSA reviewed nearly 150 research studies and other documents, many of which were submitted or referred to by docket commenters. Many of the reviewed documents reported on research conducted on motor carriers and CMV drivers. Others, such as studies on shiftwork, sleep and performance, and the physiological nature of sleep, were relevant to the issue of CMV driver safety.

The studies underlying this proposed rule make the point that adverse effects of sleep deprivation can occur when the opportunity to take sleep is curtailed, when people try to obtain sleep during periods of the day when their systems are in a more active physiological state

(such as mid-morning and early evening), or when environmental conditions are not conducive to obtaining sleep. Adverse effects include slower reaction times, poor and variable responses, deterioration of judgment, less vigilance and attention, and loss of alertness. Lack of sleep can also produce subjective feelings of tiredness, loss of motivation, and deterioration of mood.

Many of the studies germane to this NPRM, as well as to FMCSA's prior regulatory activities, are referenced in *An Annotated Literature Review Relating to Proposed Revisions to the Hours-of-Service Regulation for Commercial Motor Vehicle Drivers*, Freund, D.M., Office of Motor Carrier Safety, November 1999, Publication No. DOT-MC-99-129. That review is available in DOT Docket No. 2350, entry #956.

In preparing the 2000 NPRM and the 2003 final rule, FMCSA considered the effect of sleep quality and quantity, first and foremost, in the context of safe driving. Hours-of-service regulations exist to ensure a safe environment for the CMV driver, and for the driving public that shares the nation's highways. That said, there exists an extensive body of scientific literature that addresses the influences of hours of work and work schedules on employees' health and well-being.

Rutenfranz, J., Knauth, P., & Colquhoun, W. (1976), "Hours of Work and Shiftwork," *Ergonomics* 19(3), pp. 331-340, presents an overview of health and social concerns arising from long working hours and shiftwork. The authors consider elements of a workday (work, leisure, sleep); they note work by others indicating that sleep during the day may have less recuperative value than sleep during the night, and also that an insufficient amount of "genuine leisure time" [*i.e.*, time over and above that needed for personal needs] could result in decreased sleeping time. Although the authors hold that a daily working time of 8 hours is optimal, they note that longer or shorter workdays may be allowed or required, depending on environmental influences and levels of mental or emotional stress associated with the job. The authors cite research documenting digestive and sleep disorders among shiftworkers. Shiftworkers' sleep is shorter and of poorer quality and quantity as measured by quantitative clinical (*i.e.*, electroencephalographic) criteria. They also have considerable difficulties re-entraining [reestablishing timing of] physiological functions after shiftwork. Finally, shiftwork has adverse impacts on family and social life.

Research on CMV driver health issues generally falls into three categories: (1) The effects of sleep loss or deprivation; (2) the effects of exposure to noise, vibration, and exhaust gases and other chemicals while operating a CMV; and (3) workplace injuries and fatalities while operating a CMV.

E-1. Combined Effects

Request E-1-1. Because the new hours-of-service rule is a combination of several elements (longer driving time, a reduced driving window, more off-duty time, an optional restart section, etc.), FMCSA requests studies and other data on the combined or net effects of these hours-of-service recommendations on driver health, the safe operation of CMVs, and economic factors. The agency also seeks comments on the mutual interactions of the various elements of the rule, e.g., whether they reinforce or conflict with each other, how the net effect of the elements could be improved, etc. The agency further requests comparison of the combined effect of the incremental changes in the 2003 rule compared to the rule prior to 2003. Commenters should take into account the combined effect of any recommendations they submit on the daily on- and off-duty periods, circadian rhythms, accumulated duty time over multi-day periods, and other relevant factors.

Request E-1-2. Do the new regulations provide drivers with additional time for rest and relaxation, personal matters, and family activities? How have the new regulations impacted the "quality of life" for drivers?

E.2. Sleep Loss and Deprivation

Truck drivers have always worked long hours. This is especially true for long-haul drivers. Particularly in the truckload sector of the industry, drivers are required to spend many, and in most cases uncompensated, hours waiting to pick up and unload goods. This affects their ability to maintain their driving schedules and can have an adverse impact on regular wake-sleep cycles. From a compliance point of view, it can affect the driver's ability to operate within the bounds of the hours-of-service regulations while still obtaining the mandatory minimum off-duty time for sleep, meals, and attending to personal needs (see Freund (1999) for discussions of studies by McCartt, *et al.* (1995), Van Ouwerkerk (1988), and Belzer, M.H., *et al.*, "Proposed Changes in Motor Carrier Hours of Service: Project Report" (2002)).

Serious adverse health conditions appear to be associated with chronic sleep deprivation. In his review,

Åkerstedt (1991) cited findings by other researchers who noted increased sleep problems, as well as increased incidence of myocardial infarcts and cardiovascular disease in general. A 1999 study claimed to find that restricting sleep in healthy young men to four hours per night for only six nights "is associated with striking alterations in metabolic and endocrine function. The effects are similar to those seen in normal aging and, therefore, sleep debt may increase the severity of age-related chronic disorders" such as diabetes and hypertension (Spiegel, K., *et al.*, "Impact of Sleep Debt on Metabolic and Endocrine Function," *The Lancet*, Vol. 354, No. 9188, 23 October 1999, pp. 1435-1439). However, the implications of this study for this rulemaking appear to be ambiguous. The amount and duration of sleep deprivation required to exacerbate chronic disorders appear unclear, and the conditions under which the effects of sleep deprivation can be reversed also appear to be unclear. Finally, extended working hours tend to desynchronize the internal circadian rhythms of long-haul drivers who have work/rest cycles less than 24 hours (Stoynev, A.G., & Minkova N.K., "Circadian Rhythms of Arterial Pressure, Heart Rate and Oral Temperature in Truck Drivers," *Occupational Medicine* (London), Vol. 47, No. 3, April 1997, pp. 151-154).

Request E-2-1. Sleep Loss/Deprivation. FMCSA requests information on all adverse and beneficial effects of the new hours-of-service rule on the health of CMV drivers in contrast to the old rule. We are particularly interested in identifying any increase or reduction in sleep deprivation, and any measured changes in driver health impacts, generated as a consequence of the 2003 rule. Sleep deprivation in general: What identifies the presence or the absence of sleep deprivation in the CMV driver population? Is there any differential evidence of sleep deprivation in the CMV driver population subject to the new hours-of-service rule compared to the previous rule? How much sleep do drivers operating under the new regulations average on a daily basis, and how has this average changed as a result of the new rule? In other words, are drivers getting more or less sleep because of the new rule? Are they getting the 8 hours of sleep each day considered necessary to maintain alertness? Is there any evidence that 10 continuous hours of off-duty time does not provide adequate opportunity for drivers to obtain 8 hours of sleep each day?

Request E-2-2. Naps/Rest Periods. Several studies have addressed the effectiveness of naps and breaks in alleviating or preventing fatigue and drowsiness (Wylie, C.D., *et al.* (1996, 1997, 1998) and other studies referenced in Freund Annotated Literature Review (1999)). Do naps or short rest periods improve driver alertness in the operation of a CMV? How long should they be? At what point in the driving or duty cycle would they provide the greatest benefit? At what time of day would they provide the greatest benefit? If rest or other breaks from driving improve alertness, is there some additional amount of operational flexibility that could be afforded to a driver who chooses to take certain minimum breaks that would not increase safety risks or impair driver health? Are naps or rest periods beneficial to driver health? Does napping in a seated position provide rest equivalent to napping while lying flat (as in a sleeper berth)? Please explain.

E.3. Exposure to Environmental Stressors

CMV drivers may be exposed to harmful substances or conditions, such as diesel engine exhaust emissions and chemicals. Drivers are also exposed to vehicle vibration and noise. A number of research studies are being evaluated to determine their relationship to CMV driver hours-of-service regulations.

There has been some research on the relationship between exposure to diesel engine exhaust emissions and driver health. A Danish study claimed that a group of 14,225 truck drivers had a higher mortality rate over a ten-year period from lung cancer and multiple myeloma than did a group of 43,024 unskilled male laborers in other occupations (Hansen, E.S., "A Follow-Up Study on the Mortality of Truck Drivers," *American Journal of Industrial Medicine*, Vol. 23, No. 5, May 1993, pp. 811-821). Another study asserted that male truck drivers faced higher risk of death than other men did from colon cancer, laryngeal cancer, lung cancer, diabetes, ischemic heart disease, non-alcohol cirrhosis, and motor vehicle crashes (Aronson, K.J., *et al.*, "Surveillance of Potential Associations Between Occupations and Causes of Death in Canada, 1965-91," *Occupational and Environmental Medicine*, Vol. 56, No. 4, April 1999, pp. 265-269). A review of 30 epidemiological studies in North America and Europe (including 10 studies of truck drivers, two of bus drivers, and four of all professional drivers) similarly concluded that

occupational exposure to diesel exhaust raised the risk of lung cancer (Lipsett, M., & Campleman, S., "Occupational Exposure to Diesel Exhaust and Lung Cancer: A Meta-Analysis," *American Journal of Public Health*, Vol. 89, No. 7, July 1999, pp. 1009–1017). Another review of 15 studies of truck drivers and 10 of bus drivers suggested that exposure to diesel exhaust may also raise the risk of bladder cancer (Boffetta, P., & Silverman, D.T., "A Meta-Analysis of Bladder Cancer and Diesel Exhaust Exposure," *Epidemiology*, Vol. 12, No. 1, January 2001, pp. 125–130). Finally, CMV drivers can be exposed to chemicals in liquid or vapor form. One study, for example, found that drivers delivering gasoline can experience acute headaches, dizziness, or nausea after exposure to vapors during loading and unloading (Hakkola, M.L., *et al.*, "Changes in Neuropsychological Symptoms and Moods Among Tanker Drivers Exposed to Gasoline During a Work Week," *Occupational Medicine* (London), Vol. 47, No. 6, August 1997, pp. 344–348).

Drivers face extended exposure to highway noise that may lead to hearing loss (Van Den Heever, D.J., & Roets, F.J., "Noise Exposure of Truck Drivers: A Comparative Study," *American Industrial Hygiene Association Journal*, Vol. 57, No. 6, June 1996, pp. 564–566). Highway noise can also cause problems for drivers who are attempting to sleep in the sleeper berth while their partners drive, thereby reducing the adequacy of their restorative sleep (Seshagiri, B., "Occupational Noise Exposure of Operators of Heavy Trucks," *American Industrial Hygiene Association Journal*, Vol. 59, No. 3, March 1998, pp. 205–213). Additionally, drivers are exposed to whole body vibration (Palmer, K., "Prevalence and Pattern of Occupational Exposure to Whole Body Vibration in Great Britain: Findings from a National Survey," *Occupational and Environmental Medicine*, Vol. 57, No. 4, April 2000, pp. 229–236), which may lead to lower back pain (Pope M.H., *et al.*, "Low Back Pain and Whole Body Vibration," *Clinical Orthopedics and Related Research*, No. 354, September 1998, pp. 241–248). A Danish study examining hospital admissions over several years concluded that truck and bus drivers had higher age-standardized admission ratios for prolapsed cervical or lumbar discs, and also markedly high admission ratios for back injuries (Hannerz, H., & Tuchsén, F., "Hospital Admissions Among Male Drivers in Denmark," *Occupational and Environmental Medicine*, Vol. 58, No. 4, 1 April 2001, pp. 253–260). Many truck

drivers must perform heavy lifting, often after spending hours driving; this may contribute to injuries to the spine and ligaments (Jensen, M.V., *et al.*, "Prolapsed Cervical Intervertebral Disc in Male Professional Drivers in Denmark, 1981–1990: A Longitudinal Study of Hospitalizations," *Spine*, Vol. 21, No. 20, 15 October 1996, pp. 2352–2355).

The implications of these studies are not always clear. Some of the research has suggested that the effect of exposure to diesel exhaust was concentrated among older drivers—many of whom drove years ago when few or weaker emissions standards existed. The mortalities of drivers who drove in later time periods did not show a similar relationship. The Environmental Protection Agency (EPA) has tightened its standards on vehicle emissions in the last two decades and will again beginning in 2006. In the past five years alone, many of the components of diesel exhaust that are considered dangerous to health have been significantly reduced (Bunn, W.B., *et al.*, "What is New in Diesel Emissions?" *International Archives of Occupational and Environmental Health*, July 2002, pp. 122–132). EPA regulations that will go into effect in 2007 and 2010 will reduce these emissions levels even further.

Modern CMVs have also evolved. Truck manufacturers have improved ergonomics and driving comfort considerably. Noise levels in the cab—whether from the engine, tires, or outside sources—have been reduced. Manufacturers have continued to make great strides in reducing high-frequency truck vibration through improved cab suspensions and engine mounts. Air-suspension driver's seats are also commonplace. However, the long-term effects of current emissions, noise levels, and vibration, even in modern vehicles, are largely unknown. To this end, FMCSA requests information on the impacts of exposure (noise, vibration, and chemical emissions) on the health of commercial motor vehicle drivers as they relate to driver hours of service.

Request E-3-1. Exposure. In this request and throughout this NPRM, we are looking at only injuries or conditions directly related to the hours-of-service regulations and operating a CMV, not other workplace injuries, which are outside the jurisdiction of FMCSA. What are the current standards and/or testing data regarding vehicle noise, vibration, and emissions? How have these standards changed over time? Does any research or data assess the impact on driver health of exposure to diesel exhaust emissions, exposure

via respiration or skin contact with other chemicals, noise, and vibration during the operation of a CMV or during rest periods in a sleeper berth? Since the new hours-of-service rule allows drivers 11, rather than 10, hours of driving time, what are the consequences to drivers of one additional hour of such exposure in the vehicle per day? What are the exposure effects of the new 14-hour rule, in contrast to the previous 15-hour rule? What other exposure factors relating to the new hours-of-service regulations adversely or beneficially affect CMV driver health? Is revision of the hours-of-service rule the appropriate answer to adverse exposure impacts? What are the economic costs of addressing exposure through hours of service?

E.4. Workplace Injuries and Fatalities

According to information from the Bureau of Labor Statistics, U.S. Department of Labor, transportation workers suffer more fatalities than any other occupational group, accounting for 12 percent of all U.S. worker deaths annually. Nearly two-thirds of these fatalities are caused by highway crashes. Truck drivers also have more nonfatal injuries than workers in any other occupation. Half of the nonfatal injuries were serious sprains and strains.

Request E-4-1. Workplace Injuries and Fatalities. In this request and throughout this NPRM, we are looking at only injuries directly related to the hours-of-service regulations and operating a CMV, not other workplace injuries that are outside the jurisdiction of FMCSA. What is the impact of fatigue and loss of alertness on CMV driver workplace injuries and fatalities? Does the evidence connect these injuries or fatalities to specific aspects of the current or previous hours-of-service regulations? Please distinguish injuries and fatalities related to the hours-of-service regulations and operation of a CMV from other workplace hazards such as those related to loading and unloading.

E.5. Lifestyle Choices

Lifestyle choices, including diet and exercise, may impact driver health and safety. Realistically, such choices cannot be regulated by FMCSA. For example, while the hours-of-service regulations prohibit driving during off-duty hours, they do not prevent the driver from engaging in personal activities, rather than sleeping. Similarly, an excessive or unhealthy diet can lead to obesity, which in turn may predispose a driver to diabetes or back problems.

Request E-5-1. Lifestyle Choices. What effect do certain lifestyle choices, such as diet, exercise, and the use of off-duty time, have on driver safety and health?

F. Primary Components

F.1. Driving Time, On-Duty Time, and Off-Duty Time

Sleep researchers and the motor carrier industry generally agree that the hours-of-service rules should promote work schedules built on a 24-hour day. Studies exploring the relationship between sleep obtained and subsequent performance, both in laboratory and operational settings, generally indicate that a person who is sleepy is more prone to perform poorly on tasks requiring vigilance, quick reaction time, and decisionmaking than a person who is alert. The scientific basis for restricting driving time includes research findings indicating that inadequate sleep can lead to fatigue, and several periods of insufficient sleep (inadequate in quantity or quality) cause sleep debt or cumulative fatigue.

The 2003 hours-of-service rule permits up to 11 hours of driving time after 10 consecutive hours off duty. Compared to the previous rule, this permits up to one additional hour of driving time, but requires at least 2 additional hours of off-duty time. The new rule also limits driving to a 14-hour window after a driver comes on duty. Unlike the previous 15-hour rule, the new rule does not permit a driver to extend his or her on-duty time by subtracting breaks, waiting, and other off-duty periods from the calculation of on-duty time. The new rule addresses the issue of driver fatigue by providing drivers a daily opportunity to obtain a full 8 hours of sleep and still have time available for other personal activities within the minimum 10-hour off-duty period. We believe that the net effect of these changes is that the driver spends less time on duty, in most cases, and usually has the time necessary to commute and attend to personal matters, while still obtaining the 8 consecutive hours of sleep recommended in the scientific literature to ensure alertness.

The mandatory minimum 10-hour off-duty time, combined with a maximum 14-hour window in which driving can occur, establishes a 24-hour day for the driver who maximizes on-duty time and minimizes off-duty time. This routine is consistent with the well documented, near-24-hour circadian cycle that regulates energy and alertness levels. FMCSA concluded that the advantages of putting most drivers on a 24-hour, or

near-24-hour, work cycle, combined with the opportunity to obtain 8 or more hours of sleep per night, will result in a well-rested driver capable of driving the additional 1 hour per day. The new rule also provides flexibility for the motor carrier industry and drivers. If necessary, a driver can work a 21-hour "day" by driving for 11 hours, taking 10 hours off duty, using no other on-duty time, and then resuming driving again. This compressed schedule may be useful to address operational demands. We doubt drivers will use it regularly, however, because their workload requires on-duty activities such as loading and unloading, completing paperwork, fueling, daily vehicle inspections, and dispatch call-ins beyond the 11-hour driving period. But when the 21-hour cycle is used, it is considerably less disruptive to the body's circadian rhythms than the 18-hour "day" allowed by the old hours-of-service rules (10 hours of driving followed by 8 hours off duty). We invite comments on the safety and health effects of the 21-hour cycle, especially as compared to the 18-hour cycle allowed under the old rule.

Among other *dicta* included in its *Public Citizen* decision, the D.C. Circuit questioned whether FMCSA's argument that additional off-duty time and a 14-hour driving window justified a one-hour increase in total driving time. The court suggested the agency lacked supportive scientific evidence to support allowing an additional hour of driving per "day."

Each driver should have an opportunity for 8 consecutive hours of uninterrupted sleep every day. Nine hours off duty were originally required in 1937. For various reasons, organized labor objected to most of the original regulations, and upon further deliberation, the ICC reduced the 9-hour off-duty period to 8 hours in each 24 hours (6 M.C.C. 557, July 12, 1938). In 1962, the hours-of-service rule was changed to move away from a strict 24-hour period, and allow driving to resume again after 8 hours off-duty regardless of whether a new "day" (24-hour period) had begun. FMCSA's final rule of April 2003, required a minimum of 10 consecutive hours off duty. This was a result of the concern that many carriers were not providing drivers more than the minimum 8 hours off duty (although the previous regulation allowed them to do so) and that many drivers accept tight schedules without objection. These drivers also had to commute home, eat one or two meals, care for family members, bathe, get physical exercise, and conduct other personal activities, all within an 8-hour

off-duty period. To afford the driver an opportunity to obtain a minimum period of 8 hours of sleep, research showed that the off-duty period needed to be increased from 8 hours to 10 hours.

Studies in aviation (Gander, *et al.* (1991)), rail (Thomas *et al.* (1997), Moore-Ede *et al.* (1996)), and maritime environments (U.S. Coast Guard Report No. CG-D-06-97, U.S. Coast Guard (1997) (MCS 68/INF.11)) confirmed the need for additional off-duty time. Studies of truck drivers, including Lin *et al.* (1993) and McCartt *et al.* (1995), point specifically to increased crash risk and recollections of increased drowsiness or sleepiness after fewer than nine hours off duty. Studies performed in laboratory settings, as well as studies assessing operational situations, explore the relationships between the sleep obtained and subsequent performance (Dinges, D.F., & Kribbs, N.B. (1991); Bonnet, M.H., & Arand, D.L. (1995); Belenky, G., *et al.* (1994); Dinges, D.F., *et al.* (1997); Pilcher, J.J., & Huffcutt, A.I. (1996); Belenky, G., *et al.* (1987)). The results of the studies show that a person who is sleepy is prone to perform more poorly on tasks requiring vigilance and decision-making than a person who is alert. The time when sleep is taken is important as well because sleep fragmentation can be a byproduct of the timing or the quality of the sleep environment (Bonnet, M.H. (1994); Roehrs, T., Zorick, F., & Roth, T. (1994); Mitler, M.M., *et al.* (1997)); and Wylie, D. (1998)). It is virtually impossible to get an adequate amount of sleep when time for commuting, meals, personal errands, and family/social life is subtracted from an 8-hour off-duty period, as the ICC found in 1937. Wylie *et al.* (1996) also addresses these issues.

Request F-1-1. What are the impacts on driver health, the safe operation of CMVs, and economic factors of incremental increases in maximum driving time? For example, to what extent does an increase in maximum driving time from 10 hours to 11 hours affect driver health, the safe operation of CMVs, and economic factors in the CMV industry?

Request F-1-2. What are the impacts on driver health, the safe operation of CMVs, and economic factors of incremental increases in the minimum required off-duty period? For example, to what extent does an increase in minimum off-duty time from 8 hours to 10 hours affect driver health, the safe operation of CMVs, and economic factors in the CMV industry?

Request F-1-3. What are the impacts on driver health, the safe operation of

CMVs, and economic factors of incremental decreases in the "duty period" from 15 non-consecutive hours to 14 consecutive hours? For example, to what extent does a decrease in the duty period from 15 non-consecutive hours to 14 consecutive hours affect driver health, the safe operation of CMVs, and economic factors in the CMV industry?

Request F-1-4. To what extent does a reduction of the "daily" duty-period from 15 non-consecutive hours to 14 consecutive hours, and the increase in minimum off-duty time from 8 hours to 10 hours, offset the increase in allowable driving time from 10 hours to 11 hours in terms of driver health, the safe operation of CMVs, and economic factors in the CMV industry? Are there clinical or other studies examining the impact on driver health and the safe operation of CMVs of up to 11 hours of limited physical activity, such as driving for up to 11 hours?

Request F-1-5. How has the length of a driver's total daily work period changed under the new rules? How long was the typical total workday, from start to finish, under the former rule compared to the new 14-consecutive-hour rule?

F.2. The 34-Hour Restart and 60/70-Hour Rules

Few research studies address the effect of recovery periods between work periods spanning multiple days. O'Neill *et al.* (1999) [referenced in the 1999 Literature Review] assessed the interactions between several trucking industry operating practices and driver fatigue-related performance decrements. The activities studied were: loading and unloading freight; the amount of non-duty time ("rest and recovery") required to reestablish baseline fitness for duty at the end of a multiday series of work shifts; and a sustained schedule consisting of 14 hours on duty and driving time followed by 10 hours off duty. The study design included two days of orientation; five 14-hour days (7 a.m. to 9 p.m.) followed by 58 hours off; five more 14-hour days and a second 58-hour period off; and a final 14-hour day. The 14-hour duty periods included three scheduled breaks totaling approximately two hours. The study participants alternated periods of driving a high-fidelity fixed base simulator with performance of a physical loading task. The researchers reported the drivers did not appear to have accumulated significant sleep loss during the study but their amount of measured sleep increased and their sleep latency decreased on their first off-duty days. The researchers suggested,

among other things, that a full two nights and one day off (that is, "Friday night" to "Sunday morning"—about 32 hours off duty) would be a minimum safe restart period, under the conditions tested. They also stated, as a caveat, that results of this study may not be generalized 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 driver is accustomed to in terms of circadian disruptions or longer-than-usual on-duty periods.

On the other hand, not all research studies have reached the same conclusions. Wylie, C.D., *et al.* (1997) [referenced in Freund, 1999] stated the following in the Abstract of their study report:

The purpose of the study was to assess the "recovery" effects of zero, one, and two workdays off on driver fatigue, alertness, and performance. It involved 25 of the 40 drivers who participated in the two 13-hour observational conditions of the DFAS [Driver Fatigue and Alertness Study]. Drivers had nominally 12, 36, and 48 hours time off after the fourth workday.

For one workday off (36 hours), there was: (1) No objective evidence of driver recovery; (2) some improvement in drivers subjective feeling reflected by self-rating, although this could be a reflection of driver expectation of recovery; (3) for day-start drivers, some increase in the amount of sleep obtained during time off; and (4) for night-start drivers, interference with work-rest patterns and less sleep during time off.

For two workdays off (*i.e.*, 48 hours), there was no objective evidence of driver recovery although the statistical power of the tests to detect recovery effects was not high because of random variation associated with the smaller number of drivers. (p. iii)

Smiley, A., & Heslegrave, R. (1997) found only one study (Wylie *et al.*, 1997) that specifically dealt with an operational schedule that would be permitted under a 36-hour reset scenario. The authors state this is mainly because such a short reset period would result in schedules that would exceed current hours-of-work regulations in most countries. They note that Wylie and his co-authors, as well as the reviewers, considered data from this study to be more suggestive of trends because of the small number of subjects and the fact that sleep during recovery periods was not recorded using full polysomnography (as were the sleep periods during the work periods). They cited several other scientific studies dealing with recovery time. The results of these studies and CMV driver hours-of-service requirements may or may not be related. For example, a 1967 study by Lille suggested that a single day off was insufficient for night workers to recover

after a sleep debt accumulated over five days. Other studies indicated a preference for a three-day rest period compared to a two-day period after three 12-hour night shifts; a preference for two days and three days off over one day off when comparing automatic brakings experienced by locomotive engineers; and a 1994 literature review indicating two nights of recovery sleep as usually being sufficient to allow near full recovery after extended periods of sleep loss.

Under both the old and new hours-of-service regulations, most drivers are prohibited from driving after reaching a maximum 60 hours of on-duty time in any consecutive 7-day period, or 70 hours in 8 days. A driver working the current maximum 14-consecutive-hour duty period without a break and taking the minimum 10 hours off duty would reach the 60-hour on-duty limit in slightly less than 4½ days (4½ days × 14 hours = 63 hours), after which he or she could not drive a CMV until enough calendar days had passed to bring the driver within the 60-hours-in-7-consecutive-days limitation. In this example, the driver could only drive 4 hours on the fifth day (60 - (14 × 4) = 4) and would then have to take an additional 2 full days off duty to fall within the limit of 60 hours in any 7 consecutive days. This results in nearly 3 days of required off-duty time.

A fairly common misunderstanding is the belief that the hours-of-service rule establishes a limit on the number of hours a driver may *work* in any time period. The rule only limits the driver's ability to *drive* a CMV after a certain number of hours of work or driving. In other words, the driver may work unlimited hours, but may not drive a CMV unless he or she is within hours-of-service limits. For example, on a Friday night a driver has reached the 60- or 70-hour on-duty limit within 7 or 8 consecutive days. On a Friday night, Saturday, and indefinitely thereafter, this driver could continue to perform non-driving duties without being in violation of the hours-of-service rule. However, before the driver could operate a CMV, the driver would have to be completely off-duty for enough days to bring the total on-duty hours within any 7- or 8-consecutive days under the 60- or 70-hour limits.

As a matter of background, section 345 of the National Highway Designation Act of 1995 [Pub. L. 104-50, 109 Stat. 568] created a "24-hour restart" exemption from the 60- and 70-hour rules for drivers of utility service vehicles, CMVs transporting ground-water well drilling rigs, and

construction materials and equipment. This exemption is still in effect.

In 49 CFR 395.3(c) FMCSA added a "restart provision" which allowed any 7- or 8-day period to end with the beginning of any off-duty period of 34 or more consecutive hours. In other words, at any point before exceeding the 60/70-hour limit, a driver may restart the 60/70-hour clock (or calculation) after taking 34 or more consecutive hours off duty. Consistent with previous interpretations of the 60/70-hour rule, FMCSA interprets this provision to mean that if the driver exceeded the 60 or 70 hours on duty, he or she could not

start the 34-hour restart period until enough calendar days had passed to bring the driver within the 60 hours in 7 consecutive days (or 70 hours in 8 days) limitation. The 34-hour restart provides an option that permits the driver to have enough time for two uninterrupted periods of 8 hours sleep before returning to work in a new multi-day duty period. However, it also allows a driver to drive more hours and be on duty more hours before driving is prohibited in a 7- or 8-day period, as shown in the table below.

This table is based on two hypothetical scenarios. The first is a

daily schedule in which the driver drives continuously for the maximum allowable time (11 hours). The second is a daily schedule in which the driver is on-duty/not-driving continuously for the maximum allowable time (14 hours of which 11 are driving). In each case, the driver takes only the minimum required off-duty (10 hours) period and, prior to reaching the 60/70 hour limit, the driver invokes the 34-hour restart provision and resumes the scenario of maximizing driving and on-duty time for the remainder of the 7/8 day period.

MAXIMUM POSSIBLE DRIVING AND ON-DUTY HOURS

(Assuming minimum 10-hour off-duty periods)	Current (2003) rule		Old rule	Available hours off duty	
	34-hour restart	Without restart (note 1)	60/70 rule (note 1)	Current rule (note 2)	Old rule (note 3)
Max. Hours Driving Only in 7 consecutive days, before driving is prohibited	77	60	60	91	108
Max. Hours Driving & On-duty in 7 consecutive days, before driving is prohibited	84	60	60	84	108
Max. Hours Driving Only in 8 consecutive days, before driving is prohibited	88	70	70	104	122
Max. Hours Driving & On-duty in 8 consecutive days, before driving is prohibited	98	70	70	94	122

Note 1: Under the current 2003 rule without imposing the 34-hour restart, and under the old rule, the maximum hours a driver may work and continue to operate a commercial motor vehicle is capped at 60 hours in 7 consecutive days (70 hours in 8 consecutive days).

Note 2: The "available hours off duty" calculation assumes the driver is maximizing the driving and driving and on-duty not driving hours (11/14 hours respectively), coupled with taking only the minimum mandatory off-duty periods (10 hours).

Note 3: The old rules prohibited driving after 60 hours in 7 consecutive days (70 hours in 8 consecutive days). Considering the total hours available within each period, 168 (7 x 24) and 192 (8 x 24) would provide 108 (168 less 60) and 122 (192 less 70) available hours off duty. However, the actual available off-duty hours may vary since the 60/70 hour rule only prohibits driving after the 60- or 70-hour limit, but does not prohibit additional hours on duty, not driving. The figure in the table represents the maximum available hours off duty for a driver not working any additional hours after reaching the 60/70 hour limit.

The 60/70-hour limitation helps prevent a driver from developing severe, cumulative fatigue and sleep deprivation when working and driving the maximum "daily" limits for an extended period. However, at times this provision may require the driver to remain off duty for longer periods of time than necessary to gain adequate restorative sleep. This occurs because the rule refers to the maximum hours on duty in a certain number of "days." The hours worked in the prior 7 or 8 consecutive days and the hours available to work in a future 7- or 8-consecutive-day period are re-calculated at midnight when a new "day" begins. As noted previously, the restart provision avoids this limitation by permitting the driver to "restart the 60/70 hour clock" after having 34 or more consecutive hours off duty, which would afford two uninterrupted periods of 8 hours sleep before returning to work in a new multi-day duty period.

The D.C. Circuit criticized FMCSA for not even acknowledging, much less justifying, that the new rule "dramatically increases the maximum

permissible hours drivers may work each week" *Public Citizen*, at 1222-1223. As shown in the table above, the restart increases 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 increases the maximum driving time permitted in a 7-consecutive-day period (from 60 hours to 77 hours). Also as shown in the table above, the restart increases 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. It also increases the maximum driving time permitted in an 8-consecutive-day period (from 70 hours to 88 hours).

In the 2003 final rule, the agency explained its rationale for the adoption of the 34-hour restart period. In essence, studies indicated that cumulative fatigue and sleep debt can develop over a weekly period, and at least two full periods of sleep are needed to "restore" a driver to full alertness. The agency determined that the 34-hour restart period, based on a full 24-hour period plus an additional 10-hour period

available for sleep, was the minimum restart which would provide adequate restorative rest.

The 34-hour restart was also seen in the 2003 final rule as a flexible alternative to the "mandatory weekend" proposed in the 2000 NPRM. Not all motor carrier operations work on a "fixed and recurring 7-day period," instead having intense days of work followed by slack times. Other operations can be disrupted by weather. The 34-hour restart allows motor carriers and drivers the option of restorative rest during the times work is not available or is interrupted.

The agency is seeking research and other data to further ascertain the effects of a 34-hour restart period on safety and driver health, and whether 34 hours is the appropriate length of time for a restart, compared to periods ranging from 24 hours (as in the NHS Act) to more than 34 hours. The agency is also reviewing the alternative of eliminating the restart provision, or of implementing it in a different way, such as limiting its use within a given time period, so as to preclude a driver accumulating an

excessive amount of on-duty time before driving.

Request F-2-1. What effect has the 34-hour restart had on driver fatigue and the ability to obtain restorative sleep? Is a 34-consecutive-hour off-duty period long enough to provide sufficient restorative sleep regardless of the number of hours worked prior to the restart? Is it different for a driver working a night or irregular schedule? What length of continuous off-duty time provides adequate opportunity for most drivers to obtain 8 hours of sleep per day?

Request F-2-2. How many drivers (or what percentage of the current driver population) are currently using the 34-hour restart option to accumulate more than 60 or 70 hours of driving time in any consecutive 7-or 8-day period? How consistently are they using this option? On the average, how many hours of driving are they accumulating in 7 or 8 consecutive days? How many drivers, or what percentage of the current driver population, are currently logging 11 hours of daily driving on a consistent basis; *i.e.*, the drivers consistently driving the maximum permissible driving time?

Request F-2-3. If a driver has already exceeded 60 hours on duty in 7 days, or 70 hours in 8 days, should the driver be permitted to utilize the 34-hour restart at any time, or should the driver be required to take enough days off duty to be in compliance with the 60/70 hour provision before starting the restart period?

Request F-2-4. What would be the impact on the industry of eliminating the 34-hour restart option relative to productivity, annual revenues, and operational costs such as labor, capital, and other? How many additional drivers does the industry anticipate it would need to hire to absorb the loss in weekly driving hours incurred if the 34-hour restart period was increased? Eliminated?

Request F-2-5. What would be the safety impact of eliminating the 34-hour restart option in terms of crashes, fatalities, and injuries?

Request F-2-6. What would be the impact on driver health of modifying or eliminating the 34-hour restart option? How would the modification or elimination of the 34-hour restart period affect driver health and the safe operation of CMVs, as a result of its effect on the 24-hour cycle (circadian rhythms)?

F.3. Sleeper-Berth Use

Historically, the sleeper berth is widely used by commercial vehicle operators to obtain rest and restore

available hours, making it legal to drive without having to take 10 consecutive hours off duty. The regulation of sleeper berth use was first considered by the ICC under the Motor Carrier Act of 1935. At that time and since, the economic and operational advantages of sleeper berths in some segments of the trucking industry have been recognized. In one of its first hours-of-service decisions, the ICC in 1937 discussed the economic need for sleeper-berth use, but stated, "We shall watch this matter closely and if we see any tendency on the part of the carriers to use sleeper cabs where such use does not appear to be reasonably necessary, steps will be taken to put limits upon this practice" (3 M.C.C. 689).

Under the 2003 final rule, drivers are permitted to accumulate the mandatory off-duty period in four ways: (1) A minimum of 10 consecutive hours off duty, (2) a minimum of 10 consecutive hours in a sleeper berth, (3) a minimum of 10 consecutive hours in any combination of off-duty and sleeper-berth periods, or (4) two sleeper-berth periods totaling 10 or more hours, with neither period being less than 2 hours.

The split-sleeper-berth provision of the 2003 final rule only permits a combination of two sleeper-berth periods for the purpose of accumulating the required 10 hours off duty. A sleeper-berth period may only be excluded in calculating compliance with the 14-hour rule when it is combined with a second qualifying sleeper-berth period. Another way of stating this is that a single sleeper-berth period of less than 10 consecutive hours is included in calculating the 14-hour tour-of-duty provision. Thus, for a driver who starts the day at 5 a.m., and later takes one sleeper-berth break for a few hours around noon, the 14-hour duty period would still end at 7 p.m. The single sleeper-berth period cannot be excluded from calculation of the 14-hour limitation.

Informal communications with drivers and carriers indicate that this limitation may create a hardship on drivers and may encourage them to avoid taking rest breaks during the duty period. Under the previous rule, drivers could exclude off-duty periods, such as "breaks" during the day, from the 15-hour on-duty maximum. Under the current rule, the 14-hour duty period represents consecutive hours, meaning that drivers may avoid breaks and meals in an attempt to accomplish as much work or travel as far as possible in the 14 hours allowed. This is in contrast to the indefinite period allowed under the old rule, because there was no maximum amount of off-duty breaks

which could be taken during the duty "day."

The use of a split-sleeper-berth period affects calculation of the maximum 11-hour driving time, 14-hour limitation, and the 60/70-hour limitation. Because sleeper-berth periods may be taken by a driver at any time, the calculations to determine whether a driver is in compliance may be very difficult. In other words, a "real world" series of logbook pages may reflect that the driver has taken a variety of sleeper-berth periods, as well as other on-duty and off-duty periods. The way in which these periods interact to determine the hours available for driving, or hours available under the 14-hour limitation, can be very complex, and has required the agency to issue extensive interpretations. Training of drivers and enforcement personnel regarding the new rule has reportedly been very difficult due to the complexities involved. Vendors of computer software for monitoring hours-of-service compliance have reported difficulty in programming their software to consistently calculate compliance. They have advised the agency that the current regulatory language, even with extensive interpretations and guidance, does not necessarily provide answers to every scenario that may develop. Enforcement personnel have also reported difficulty in calculating compliance during a roadside inspection when split-sleeper-berth periods are used. For example, at the time of inspection a driver may have only taken one sleeper-berth period and could appear to be in violation of one or more limitations. However, compliance would depend on whether the driver later takes a second combinable sleeper-berth period. Determining compliance based on potential future actions of the driver may create confusion and inconsistency, and needs to be addressed in this rulemaking.

FMCSA will consider a variety of possible changes to the sleeper-berth provisions, including but not limited to: (1) Not permitting any split sleeper-berth use to count toward the minimum 10-hours off duty, (2) allowing one continuous sleeper-berth period of less than 10-hours, such as 8 hours, to substitute for the otherwise minimum 10 hours, (3) eliminating split-sleeper-berth periods or establishing a minimum time for one of the two "splits," such as 5 hours, 8 hours, or some other appropriate level, (4) revising the manner in which sleeper-berth periods affect the calculation of the 14-consecutive-hour period, and (5)

restricting variations on permissible sleeper-berth use to team drivers only.

On November 3, 2003, the American Trucking Associations (ATA) submitted a petition for rulemaking to FMCSA, requesting that the hours-of-service rule be modified to permit a driver to extend the 14-hour on-duty period by the use of one sleeper-berth period of a minimum 2 hours duration, provided the on-duty period is followed by a minimum 10-consecutive-hour off-duty period. A copy of the ATA petition is filed in the docket for this rulemaking, and the subject matter of the ATA petition will be addressed in this rulemaking.

Request F-3-1. Does sleeping in a sleeper berth, either in a moving or stationary vehicle, have a detrimental effect on driver health and the safe operation of CMVs? What are the obstacles to getting adequate sleep in a sleeper berth? Does using a sleeper berth in a moving or stationary CMV yield less restorative sleep (qualitatively or quantitatively) than sleeping in a bed at home or at a motel? How do in-vehicle temperature fluctuations due to "no-idling" laws, and other environmental issues, impact sleeper-berth use?

Request F-3-2. What is the minimum time in each of two split-sleeper-berth periods necessary to provide restorative sleep? What is the impact of split-sleeper-berth periods on driver health and his or her ability to obtain restorative sleep and manage fatigue? How often is a single, continuous 10-hour sleeper-berth period used? How often are consecutive off-duty time and a single sleeper-berth period (*i.e.*, no split-sleeper-berth use) combined to meet the minimum 10-hour off-duty requirement?

Request F-3-3. How often are split-sleeper-berth periods used to obtain the required 10 or more hours of off-duty time? In a split-sleeper-berth operation, how much time is usually spent in the sleeper berth during a typical period? How are split-sleeper-berth periods managed (*i.e.*, number of hours in each of the two periods)? Why? How does this provide restorative sleep or prevent sleep deprivation?

Request F-3-4. What impact does team drivers' use of sleeper berths have on driver health, safe operation of CMVs, and economic factors and how do such impacts differ from impacts on single drivers?

Request F-3-5. If the agency were to eliminate the split-sleeper-berth exception and require a driver to take 10 consecutive hours off duty (in a sleeper berth, or in combination with off-duty time), what impact would this have upon driver health, the safe operation of

CMVs, and business operating practices?

Request F-3-6. If the agency were to retain the split-sleeper-berth provision, but require that one of the two periods be at least 7, 8, or 9 hours in length, what impact would this action have on driver health, the safe operation of CMVs, and economic factors? If one period is 7 or more hours in length, is that equivalent to 10 consecutive hours of non-sleeper-berth off-duty time (since little commuting and personal time would be needed, allowing a greater percentage of the off-duty period for sleep), or would a second sleeper-berth period still be required?

Request F-3-7. What time and costs are saved by utilizing a sleeper berth rather than commuting to other sleep locations such as home or a motel, and what portion of the time saved is actually spent sleeping?

Request F-3-8. How does prohibiting extension of the 14-hour tour of duty through the use of a single sleeper-berth period affect driver health, safe operation of CMVs, and economic factors? How could allowing the use of a limited sleeper-berth period to extend the 14-hour limitation be accomplished without having a detrimental effect on highway safety? What would be the appropriate length of such a limited sleeper-berth rest period?

Request F-3-9. If the current hours-of-service rules are generally retained "as is," do you have any suggestions to simplify the sleeper-berth calculations, yet provide the same or better levels of driver health, safety, and operational flexibility? How could the sleeper-berth provisions be modified or more clearly stated to simplify calculations but not have a negative impact on driver health, safety, and operational considerations?

Request F-3-10. Should the rule allow sleeper-berth periods to be combined with off-duty periods when calculating a continuous off-duty period? Should a sleeper-berth period that is part of a period of 10 or more consecutive hours off duty also be combinable with a later sleeper-berth period to allow a split-sleeper-berth calculation?

F.4. Electronic On-Board Recording Devices (EOBRs)

As indicated above, on September 1, 2004 (69 FR 53386), FMCSA published an ANPRM requesting information about the use of electronic on-board recording devices as a substitute for paper copies of driver records of duty status ("logbooks"). As the agency said in the preamble to that document, "FMCSA is attempting to evaluate the suitability of EOBRs to demonstrate

compliance with the enforcement of the hours-of-service regulations, which in turn will have major implications for the welfare of drivers and the safe operation of commercial motor vehicles." The ANPRM requested comments and information on EOBR performance specifications and the potential costs and benefits of such devices.

F.5. Other Provisions

General Requests

Request F-5-1. Please provide supplemental information or data on any topic discussed in this NPRM that could augment existing information for a final rule or other agency action regarding hours of service in the future. Are there "gaps" in available data? Describe the substantive nature of any data or information that you believe is necessary to support a particular requirement but does not exist. Explain what the ideal data or information set would contain. Include a discussion not only of the individual requirements of the current rule, but also of the interrelationships among those requirements and their impact on driver health, the safe operation of CMVs, and economic factors. In addition, suggest processes, methodologies, and sources that would facilitate the collection and analysis of data on the topic or topics. In responding here, commenters are requested to provide data and other information in the context of driver hours-of-service requirements and the incremental changes from the old rule to the new rule.

Request F-5-2. What has been the effect of the new hours-of-service regulations upon CMV-related crashes? Please provide detailed information, if available.

Request F-5-3. What has been and will be the effect of CMV improved or reduced driver compliance as a result of the changes made by the new hours-of-service rules? Have CMV drivers become more or less compliant with the regulations?

Short-Haul Exemption

For local short-haul drivers, driving is only part of their daily work routine. These drivers perform a variety of tasks including, but may not be limited to, receiving the day's driving schedule, driving, loading and unloading the vehicle, getting in and out of the vehicle numerous times, lifting and carrying packages, and engaging in customer relations. The research on local short-haul operations has suggested that fatigue is less of a problem than for long-haul drivers ("Impact of the Local

Short Operations on Driver Fatigue," Hanowski, R., *et al.* (2000) and "Short-Haul Trucks and Driver Fatigue," Massie, D.L., *et al.* (1997)). Since local short-haul drivers typically work daytime hours, they are much more likely to maintain regular schedules that are less intense than many long-haul drivers. Short-haul drivers are significantly less likely to be working 13 or more hours or to have irregular circadian patterns. Also, local short-haul drivers typically sleep at home every night in their own beds. Thus, local short-haul drivers are much more likely to be getting the daily restorative sleep necessary to maintain vigilance.

As a result, the 2003 hours-of-service rule provided a special exemption for local short-haul operations, which included those drivers who return to their normal work-reporting location on a regular daily basis. The exemption provided greater flexibility with regard to on-duty hours for local short-haul drivers. The rule provided an exception to the 14-hour limit once a week (or after a 34-hour restart period), which allows two additional non-driving hours.

Based on the data and research available at the time, FMCSA was convinced that the 14-hour limit for most drivers, with a 16-hour limit for short-haul drivers once a week, is materially better from a safety standpoint than the earlier hours-of-service rule. Drivers under the old rule could extend their daily working well beyond the allowed 15-hour limit, because of "off-duty" breaks, meals, and weather-related conditions. The added two hours of work time once a week could be productively used by the short-haul segment to meet peak demands, accommodate training, and complete required recordkeeping.

For these reasons, FMCSA is proposing to continue the local short-haul exemption.

G. Rulemaking Analyses and Notices

Because FMCSA is reexamining the hours-of-service regulations for drivers and operators of property-carrying CMVs that were published on April 28, 2003 (68 FR 22456) and amended on September 30, 2004 (68 FR 56208), the rulemaking analyses and notices, and regulatory language accompanying that final rule (see 68 FR 22505–22513) remain applicable to this NPRM and are not being fully reprinted in this notice.

In the Regulatory Impact Analysis (RIA) to the 2003 final rule, FMCSA evaluated three alternative proposals for the hours-of-service rule. The alternative that was adopted and became the 2003 final rule was referred

to in the RIA as the "FMCSA Proposal." The full text of the RIA that was prepared for the 2003 final rule is located in that docket (FMCSA–1997–2350–23302) and the docket to this rulemaking.

G.1. Executive Order 12866 (Regulatory Planning and Review) and DOT Regulatory Policies and Procedures

FMCSA has determined that this rulemaking constitutes an economically significant regulatory action under Executive Order 12866 because the agency estimates this action will have an annual effect on the economy of \$100 million or more. This is the effect of the change from the hours-of-service rule prior to 2003, compared to the current rule published in 2003, which is being reexamined in this NPRM. FMCSA has also determined that this regulatory action is significant under the regulatory policies and procedures of DOT because of the high level of interest concerning motor carrier safety issues expressed by Congress, motor carriers, their drivers and other employees, State governments, safety advocates, and members of the traveling public. Finally, FMCSA has determined that this regulatory action is a major rule under the Congressional Review Act, 5 U.S.C. 801 *et seq.*

The RIA for the final rule published on April 28, 2003 (Docket FMCSA–1997–2350–23302), estimated net social benefits to be \$1.1 billion annually, when compared to the previous hours-of-service rules with full compliance. Alternatively, when compared to the previous rules under an assumption of less than full compliance, the current rule results in annual net social benefits of -\$611 million. When assuming less than full compliance by industry with the previous hours-of-service rules, total annual costs of the new rules equal approximately \$1.3 billion. For major rules involving annual economic effects of \$1 billion or more, the Office of Management and Budget requires several new issues to be considered as part of the RIA (OMB Circular A–4, published September 17, 2003). Most notably, the RIA must present a formal quantitative analysis of the relative uncertainties concerning particularly important benefit and cost elements of the rule. Additionally, a cost-effectiveness analysis is required for all major rulemakings for which the primary benefits are improved public health and safety, where valid effectiveness measures can be developed. As such, FMCSA has prepared these two supplemental analyses to the RIA and will include them in the docket to this rulemaking.

The original RIA that accompanied the 2003 final rule has not been changed or reprinted, but answers to the following questions would help FMCSA to prepare the new RIA that will be required when the agency adopts a final rule.

Request G–1–1. What changes have been made by shippers and carriers to adjust to the 14-hour rule? What was the cost of those changes? What would be the additional costs if the 14-hour rule were changed again? Has the loading and unloading of CMVs become more or less efficient as a result of the 14-hour rule? What has been the economic impact of this change?

Request G–1–2. What has been the economic impact of the new regulations on all segments of the motor carrier industry? For example, have motor carrier revenues and shipping costs increased or decreased as a result of the new hours-of-service regulations?

Request G–1–3. What costs have been incurred in re-training personnel to understand the new hours-of-service rule?

Request G–1–4. What is the impact of the driver wage structure (either per mile or per hour) on the hours driven and/or health and safety of drivers under the new rule?

Request G–1–5. How many, or what percentage of, motor carriers provide health insurance for their drivers? If not covered by their employer, how many drivers currently purchase their own health insurance? How many are uncovered? If the agency reduced the driving time allowed by the 2003 rule, or shortened the daily or weekly on-duty period during which driving is allowed, would motor carrier revenues and/or profits be sufficient to sustain employer-provided health insurance? At what point, in terms of regulatory limits, would employers curtail or end such health insurance? At what point would shorter driving times or on-duty windows reduce driver income enough to make health insurance unaffordable?

G.2. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA), requires Federal agencies to analyze the impact of rulemakings on small entities, unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. In its analysis for the April 28, 2003, final rule, FMCSA determined that while large numbers of small entities would be affected with regard to their short-haul operations, no significant economic

impacts were projected for a substantial number of small entities.

Although the RFA section of the 2003 final rule is not being changed or reprinted, answers to the following questions would help FMCSA to prepare the small-business impact analysis that will be required when the agency adopts a final rule.

Request G-2-1. Since implementation of the 2003 final rule starting in January 2004, what has been the impact on small motor carriers (those with less than \$21.5 million in annual revenues) with *short-haul operations*, specifically with regard to your revenues and costs (labor, capital, and other)? In responding to this question, please be specific as to the period for which the revenue and cost impacts are being measured (e.g., monthly, biannual, or six months). In addition, please indicate whether you are a truckload or less-than-truckload (LTL) carrier (or drive for one), a private or for-hire motor carrier (or drive for one), and those commodities you haul most frequently.

Request G-2-2. Since implementation of the 2003 final rule, what has been the impact on small motor carriers (those with less than \$21.5 million in annual revenues) with *long-haul operations*, specifically with regard to your revenues and costs (labor, capital, and other)? In responding to this question, please be specific as to the period for which the revenue and cost impacts are being measured (e.g., monthly, biannual, or six months). Please indicate whether you are a truckload or LTL carrier (or drive for one), a private or for-hire motor carrier (or drive for one), and those commodities you haul most frequently.

Request G-2-3. For small motor carriers with *short-haul operations*, please provide a breakdown of the cost changes resulting from implementation of the 2003 final rule. For example, please separate cost increases or decreases by changes in labor costs (e.g., driver salaries and fringe benefits), capital or equipment costs (e.g., recent purchase or sale of tractors and trailers), and other capital (i.e., infrastructure) or operating costs. Please indicate whether you are a truckload or LTL carrier (or drive for one), a private or for-hire motor carrier (or drive for one), and those commodities you haul most frequently.

Request G-2-4. For small motor carriers with *long-haul operations*, please provide a breakdown of the cost changes resulting from implementation of the 2003 final rule. For example, please separate cost increases or decreases by changes in labor costs (e.g., driver salaries and fringe benefits),

capital or equipment costs (e.g., recent purchase or sale of tractors and trailers), and other capital (i.e., infrastructure) or operating costs. Please indicate whether you are a truckload or LTL carrier (or drive for one), a private or for-hire motor carrier (or drive for one), and those commodities you haul most frequently.

G.3. Unfunded Mandates Reform Act of 1995

The Unfunded Mandates Reform Act of 1995 requires each agency to assess the effects of its regulatory actions on State, local, and tribal governments and the private sector. Any agency promulgating a final rule resulting in a Federal mandate requiring expenditure by a State, local, or tribal government or by the private sector of \$120.7 million or more in any one year must prepare a written statement incorporating various assessments, estimates, and descriptions that are delineated in the Act. The hours-of-service final rule published in 2003 and being reexamined in this NPRM is a major rule that costs motor carriers more than \$120.7 million in a given year. FMCSA has prepared the following statement which addresses each of the elements required by the Unfunded Mandates Reform Act of 1995 (UMRA).

Qualitative and Quantitative Assessment of Costs and Benefits

The UMRA requires a qualitative and quantitative assessment of the anticipated costs and benefits of this Federal mandate. The 2003 final rule evaluated several proposals, including an "FMCSA Staff" option. Relative to the previous rules *with full compliance*, the FMCSA option was estimated to result in a cost savings of approximately \$900 million per year. Benefits under this "full compliance" scenario were estimated to be approximately \$200 million per year, resulting in net benefits of \$1.1 billion per year. The final rule does not impose any cost on State, local, or tribal governments.

Effect on Health, Safety, and the Natural Environment

The UMRA also requires FMCSA to discuss the effect of the Federal mandate on health, safety, and the natural environment. FMCSA prepared an environmental assessment for the 2003 final rule, which was placed in the docket (FMCSA-1997-2350-23303), and is also in the docket to this rulemaking, showing that the rule would not have a significant impact on the natural environment. The effects of the rule on health and safety are much more significant: the primary benefit of

the 2003 final rule (and thus of this reexamination) was a reduction in accidents. The RIA that accompanied the 2003 final rule explains these estimates in detail in Chapters 8 and 9.

Federal Financial Assistance

Section 202(a)(2)(A) of the UMRA requires that this qualitative and quantitative assessment of costs and benefits include an analysis of the extent to which costs to State, local, and tribal governments may be paid with Federal financial assistance or otherwise paid for by the Federal Government. Since this rulemaking action is applicable only to motor carriers subject to the Federal Motor Carrier Safety Regulations (FMCSRs), there would be no cost to State, local, and tribal governments. Therefore, no Federal funds for these entities would be necessary for motor carriers to comply with the requirements. All States, however, receive Motor Carrier Safety Assistance Program (MCSAP) grants requiring them to adopt and enforce most of the FMCSRs or compatible State regulations, including the 2003 hours-of-service rule.

Future Compliance Costs

To the extent feasible, section 202(a)(3) of the UMRA requires estimates of the future compliance costs of this rulemaking action, and any disproportionate budgetary effects upon particular regions, or upon urban, rural, or other types of communities, or upon particular segments of the private sector. The 2003 final rule, which is being reexamined here, has no disproportionate budgetary effects upon particular regions, or upon urban, rural, or other types of communities. The RIA accompanying the 2003 final rule includes an analysis of the impact of the "FMCSA Proposal" on various regions, using the REMI Policy Insight™ Model. The model showed no significant disparate impact on any region. These impacts are discussed in chapter 11 of the RIA.

Effect on the National Economy

Section 202(a)(4) of the UMRA requires estimates of the effect on the national economy, such as the effect on economic growth, full employment, creation of productive jobs, and international competitiveness. The REMI model mentioned above also yielded an estimate of the macroeconomic³ costs of the options. Relative to the previous rule with 100

³ Macroeconomics: concerned with the behavior of the entire national economy, or major segments of it.

percent compliance, FMCSA estimated that the impact on gross regional product⁴ (GRP) would be minimal, less than 0.1 percent of GRP for all the alternatives. One alternative would have reduced GRP by almost \$12 billion per year, while all other alternatives would have resulted in a small increase in GRP.

Because FMCSA believed the overall driving time for most CMV drivers would not change, the agency concluded the alternatives would not have a significant impact on full employment or the creation of productive jobs. The agency also did not believe that the "FMCSA Proposal" would have any significant impact on international competitiveness.

Prior Consultations With Elected Representatives of Any Affected State, Local, or Tribal Governments

This reexamined rule does not *require* action by State, local, or tribal governments. Therefore, no prior consultations with elected representatives of these governments were initiated.

Decision To Impose an Unfunded Mandate

When Congress created FMCSA, it provided that, "[i]n carrying out its duties the Administration shall consider the assignment and maintenance of safety as the highest priority * * *" [49 U.S.C. 113(b)]. As indicated above, section 408 of the ICCTA directed the agency—then part of FHWA—to begin a rulemaking dealing with a variety of fatigue-related safety issues, including "8 hours of continuous sleep after 10 hours of driving, loading and unloading operations, automated and tamper-proof recording devices, rest and recovery cycles, fatigue and stress in longer combination vehicles, fitness for duty, and other appropriate regulatory and enforcement countermeasures for reducing fatigue-related incidents and increasing driver alertness * * *" [109 Stat. 958]. The agency's statutory focus on safety and the specific mandate of section 408 both demanded that the 2003 final rule improve CMV safety.

The 2003 final rule, which is being reexamined, represents a substantial improvement in addressing driver fatigue over the previous rule. Together, the provisions are expected to reduce the effect of cumulative fatigue and prevent many of the accidents and

fatalities to which fatigue is a contributing factor. Because the agency's statutory priority is safety, FMCSA adopted a rule that was marginally more expensive than other alternatives but would reduce fatigue-related accidents and fatalities more substantially, even though it imposes an unfunded mandate.

G.4. National Environmental Policy Act

FMCSA analyzed the alternatives discussed in the RIA accompanying the 2003 final rule as required by the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and DOT Order 5610.1C. As shown in Table 25 of the 2003 final rule preamble (Environmental Assessment), none of the alternatives had a significant adverse impact on the human environment and all of the alternatives had beneficial impacts in some areas. None of the alternatives stood out as environmentally preferable, when compared to the other alternatives. This environmental assessment and finding of no significant impact (FONSI) for the 2003 final rule are in the docket for that rule (FMCSA-1997-2350-23303), as well as in the docket to this rulemaking. The National Environmental Policy Act (NEPA) section of the 2003 final rule preamble is not being changed or reprinted here. However, to assist the agency in preparing the NEPA analysis that will be required when the agency adopts a final rule, FMCSA requests comments.

Request G-4-1. What impact would the possible changes to the 2003 final rule discussed in this NPRM have on the environment?

G.5. Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501 *et seq.*), Federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct, sponsor, or require through regulations. FMCSA determined that this NPRM will affect a currently approved information clearance for OMB Control Number 2126-0001, titled "Hours of Service of Drivers Regulation." OMB approved this information collection on April 29, 2003, at a revised total of 160,376,492 burden hours, with an expiration date of April 30, 2006. The PRA requires agencies to provide a specific, objectively supported estimate of burden that will be imposed by the information collection. See 5 CFR 1320.8. The paperwork burden imposed by FMCSA's record-of-duty-status (RODS) requirement is set forth at 49 CFR 395.8.

The agency believes that the possible revisions to the 2003 final rule discussed in this NPRM will not bring about an appreciable change in the paperwork burden to the estimated 4.2 million drivers required to complete and maintain the RODS, which is commonly referred to as a "logbook." This NPRM and a supporting statement reflecting this assessment have been submitted to OMB. You may submit comments on this directly to OMB. OMB must receive your comments by March 10, 2005. You must mail or hand deliver your comments to: Attention: Desk Officer for the Department of Transportation, Docket Library, Office of Information and Regulatory Affairs, Office of Management and Budget, Room 10102, 725 17th Street, NW., Washington, DC 20503.

G.6. Executive Order 13211 (Energy Supply, Distribution, or Use)

FMCSA analyzed the 2003 final rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. As a part of the Environmental Assessment, FMCSA analyzed the alternatives discussed in the preamble to the 2003 final rule. Table 26 of that final rule preamble showed the energy consumption effects of the alternatives. From a national energy consumption perspective, the FMCSA alternative, which was adopted and is being reexamined in this NPRM, had essentially a net zero effect on national energy consumption. FMCSA does not consider this effect to be significant.

In accordance with Executive Order 13211, the agency prepared a "Statement of Energy Effects" for the 2003 final rule. A copy of this statement is in Appendix D to the Environmental Assessment of the 2003 final rule (Docket FMCSA-1997-2350-23303).

G.7. Executive Order 12898 (Environmental Justice)

FMCSA evaluated the environmental effects of the alternatives discussed in the 2003 final rule in accordance with Executive Order 12898 and determined that there were no environmental justice issues associated with revising the hours-of-service regulations. Environmental justice issues would be raised if there were "disproportionate" and "high and adverse impact" on minority or low-income populations. FMCSA determined through the Environmental Assessment that there were no high and adverse impacts associated with any of the alternatives. In addition, FMCSA analyzed the demographic makeup of the trucking

⁴ Gross Regional Product (GRP): the market value of all goods and services produced by a regional (*i.e.*, multi-State) economy. The REMI model used in this analysis included six multi-state regions that, when aggregated, comprise the entire U.S. economy.

industry potentially affected by the alternatives and determined that there was no disproportionate impact on minority or low-income populations. This is based on the finding that low-income and minority populations are generally underrepresented in the trucking occupation. In addition, the most impacted trucking sectors do not have disproportionate representation of minority and low-income drivers relative to the trucking occupation as a whole. Appendix E of the Environmental Assessment provides a detailed analysis used to reach this conclusion.

G.8. Executive Order 13045 (Protection of Children)

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks (April 23, 1997, 62 FR 19885), requires agencies issuing "economically significant" rules to include an evaluation of their environmental health and safety effects on children, providing the agency has reason to believe the rule may disproportionately affect children. FMCSA evaluated the projected effects of the 2003 final rule and the various alternatives and determined that they would not create disproportionate environmental health or safety risks to children. The only adverse environmental effect with potential human health consequences is the projected increase in emissions of air pollutants. The final rule resulted in a minor increase in emissions on a national scale. FMCSA projects no adverse human health consequences to either children or adults because the magnitude of emission increases is small. The 2003 final rule and

alternatives, however, reduced the safety risk posed by tired, drowsy, or fatigued drivers of CMVs. These safety risk improvements accrued to children and adults equally.

G.9. Executive Order 12988 (Civil Justice Reform)

This action meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

G.10. Executive Order 12630 (Taking of Private Property)

This reexamined rule will not effect a taking of private property or otherwise have "taking implications" under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

G.11. Executive Order 13132 (Federalism)

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 13132. FMCSA has determined the 2003 final rule, which is being reexamined here, does not have a substantial direct effect on States, nor would it limit the policymaking discretion of the States. Nothing in this document preempts any State law or regulation.

A State participating in the Motor Carrier Safety Assistance Program (MCSAP) that fails to adopt the 2003 final rule three years after its effective date (June 27, 2003) will be deemed to have incompatible regulations and will not be eligible for MCSAP Basic Program or Incentive Funds in accordance with 49 CFR 350.335(b).

MCSAP has no federalism implications under Executive Order 13132.

G.12. Executive Order 12372 (Intergovernmental Review)

Catalog of Federal Domestic Assistance Program Number 20.217, Motor Carrier Safety. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities do not apply to this NPRM.

List of Subjects

49 CFR Part 385

Administrative practice and procedure, Highway safety, Motor carriers, Motor vehicle safety, Reporting and recordkeeping requirements.

49 CFR Part 390

Highway safety, Intermodal transportation, Motor carriers, Motor vehicle safety, Reporting and recordkeeping requirements.

49 CFR Part 395

Highway safety, Motor carriers, Reporting and recordkeeping requirements.

In consideration of the foregoing, FMCSA is reexamining the amendments to 49 CFR chapter III, parts 385, 390, and 395 as set forth in the final rule on hours of service of drivers published on April 28, 2003 (68 FR 22456) and amended on September 30, 2003 (68 FR 56208). Those amendments are not being reprinted here.

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Annette M. Sandberg,
Administrator.

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