

DEPARTMENT OF TRANSPORTATION**Federal Motor Carrier Safety Administration****49 CFR Parts 350, 385, 395, and 396**

[Docket No. FMCSA-2004-18940]

RIN 2126-AA89

Electronic On-Board Recorders for Hours-of-Service Compliance**AGENCY:** Federal Motor Carrier Safety Administration (FMCSA), DOT.**ACTION:** Final rule.

SUMMARY: The Federal Motor Carrier Safety Administration (FMCSA) amends the Federal Motor Carrier Safety Regulations (FMCSRs) to incorporate new performance standards for electronic on-board recorders (EOBRs) installed in commercial motor vehicles (CMVs) manufactured on or after June 4, 2012. On-board hours-of-service (HOS) recording devices meeting FMCSA's current requirements and installed in CMVs manufactured before June 4, 2012 may continue to be used for the remainder of the service life of those CMVs.

Motor carriers that have demonstrated serious noncompliance with the HOS rules will be subject to mandatory installation of EOBRs meeting the new performance standards. If FMCSA determines, based on HOS records reviewed during a compliance review, that a motor carrier has a 10 percent or greater violation rate ("threshold rate violation") for any HOS regulation listed in the new Appendix C to part 385, FMCSA will issue the carrier an EOBR remedial directive. The motor carrier will then be required to install EOBRs in all of its CMVs regardless of their date of manufacture and use the devices for HOS recordkeeping for a period of 2 years, unless the carrier (i) already equipped its vehicles with automatic on-board recording devices (AOBRDs) meeting the Agency's current requirements under 49 CFR 395.15 prior to the finding, and (ii) demonstrates to FMCSA that its drivers understand how to use the devices.

The FMCSA also changes the safety fitness standard to take into account a remedial directive when determining fitness. Additionally, to encourage industry-wide use of EOBRs, FMCSA revises its compliance review procedures to permit examination of a random sample of drivers' records of duty status after the initial sampling, and provides partial relief from HOS supporting documents requirements, if certain conditions are satisfied, for

motor carriers that voluntarily use compliant EOBRs.

Finally, because FMCSA recognizes that the potential safety risks associated with some motor carrier categories, such as passenger carriers, hazardous materials transporters, and new motor carriers seeking authority to conduct interstate operations in the United States, are such that mandatory EOBR use for such operations might be appropriate, the Agency will initiate a new rulemaking to consider expanding the scope of mandatory EOBR use beyond the "1 x 10" carriers that would be subject to a remedial directive as a result of today's rule.

DATES: Effective Date: This final rule is effective on June 4, 2010.

Compliance Date: Motor carriers must comply with this final rule by June 4, 2012. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of June 4, 2010.

ADDRESSES:

Docket: For access to the docket to read background documents including those referenced in this document, or to read comments received, go to <http://www.regulations.gov> at any time or to the ground floor, room W12-140, DOT Building, 1200 New Jersey Avenue, SE, Washington, DC, between 9 a.m. and 5 p.m. e.t., Monday through Friday, except Federal holidays.

Privacy Act: Anyone is able to search the electronic form for 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 U.S. Department of Transportation's (DOT) complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19476) or you may visit <http://dms.dot.gov>.

FOR FURTHER INFORMATION CONTACT: Ms. Deborah M. Freund, Vehicle and Roadside Operations Division, Office of Bus and Truck Standards and Operations, (202) 366-5370, Federal Motor Carrier Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001.

SUPPLEMENTARY INFORMATION: This rulemaking notice is organized as follows:

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I. Table of Abbreviations

Following is a list of abbreviations used in this document.

Advocates	Advocates for Highway and Auto Safety
AMSA	American Moving and Storage Association
ANPRM	Advance Notice of Proposed Rulemaking
ANSI	American National Standards Institute
AOBRDS	Automatic On-Board Recording Devices
ASCII	American Standard Code for Information Interchange
ATA	American Trucking Associations
ATRI	American Transportation Research Institute
Boyle	Boyle Transportation
CFR	Code of Federal Regulations
CMV	Commercial Motor Vehicle
CR	Compliance Review
CSA 2010	Comprehensive Safety Analysis 2010
CVSA	Commercial Vehicle Safety Alliance
D	Driving
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EA	Environmental Assessment
ECM	Electronic Control Module
E.O.	Executive Order
EOBR	Electronic On-Board Recorder
EU	European Union
FedEx	FedEx Corporation
FHWA	Federal Highway Administration
FIPS	Publications Federal Information Processing Standards Publications
FMCSA	Federal Motor Carrier Safety Administration
FMCSP	Federal Motor Carrier Safety Regulations
FMI	Food Marketing Institute
FOIA	Freedom of Information Act
FONSI	Finding of No Significant Impact
FR	Federal Register
GAO	Government Accountability Office
GNIS	Geographic Names Information System
GPS	Global Positioning System
Hazmat	Hazardous Materials
HMTAA	Hazardous Materials Transportation Authorization Act of 1994
HOS	Hours of Service
IBT	International Brotherhood of Teamsters
ICC	Interstate Commerce Commission
ICCTA	ICC Termination Act of 1995
ICR	Information Collection Request
IEEE	Institute of Electrical and Electronic Engineers
IIHS	Insurance Institute for Highway Safety
IRFA	Initial Regulatory Flexibility Analysis
ITEC	International Truck and Engine Corporation
J.B. Hunt	J.B. Hunt Transport, Inc.
KonaWare	KonaWare Transportation and Logistics
LH	Long Haul
Maryland SHA	Maryland State Highway Administration
Maverick	Maverick Transportation, LLC
MCMIS	Motor Carrier Management Information System
MCSAP	Motor Carrier Safety Assistance Program
MCSIA	Motor Carrier Safety Improvement Act of 1999

MTA	Minnesota Trucking Association
NEPA	National Environmental Policy Act
NHTSA	National Highway Traffic Safety Administration
1984 Act	Motor Carrier Safety Act of 1984
1935 Act	Motor Carrier Act of 1935
NPGA	National Propane Gas Association
NPRDA	Notice of Potential Remedial Directive Applicability
NPRM	Notice of Proposed Rulemaking
NPTC	National Private Truck Council, Incorporated
NTSB	National Transportation Safety Board
NRMCA	National Ready Mixed Concrete Association
OBD	On-Board Diagnostic
ODND	On Duty Not Driving
OFF	Off Duty
Ohio PUC	Public Utilities Commission of Ohio
OIG	Office of the Inspector General
OMB	Office of Management and Budget
ON	On Duty
OOIDA	Owner-Operator Independent Drivers Association, Inc.
PDA	Personal Digital Assistant
PII	Personally Identifiable Information
PIA	Privacy Impact Assessment
PMAA	Petroleum Marketers Association of America
PRA	Paperwork Reduction Act of 1995
Pub. L.	Public Law
Qualcomm	Qualcomm Wireless Business Solutions
RapidLog	RapidLog Corporation
RF	Radio Frequency
RIA	Regulatory Impact Analysis
RTA	Research and Innovative Technology Administration
RODS	Records of Duty Status
RP	Recommended Practice
SafeStat	Motor Carrier Safety Status Measuring System
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SB	Sleeper Berth
SBA	Small Business Association
SC&RA	Specialized Carriers & Rigging Association
SEA	Safety Evaluation Area
SEISNOSE	Significant Economic Impact on a Substantial Number of Small Entities
SFRM	Safety Fitness Rating Methodology
SH	Short Haul
Siemens	Siemens AG
SNPRM	Supplemental Notice of Proposed Rulemaking
Stat.	Statutes
TCA	Truckload Carriers Association
TEA-21	Transportation Equity Act for the 21st Century
TMC TPA	Technology and Maintenance Council's Technical Policy Advisory
	Tripmaster Tripmaster Corporation
UMTRI	University of Michigan Transportation Institute
U.S.C.	United States Code
UTC	Coordinated Universal Time
Verigo	Verigo Incorporated
VSL	Value of a Statistical Life
Werner	Werner Enterprises, Incorporated
XATA	XATA Corporation
Xora	Xora, Incorporated

II. Legal Basis for the Rulemaking

The Motor Carrier Act of 1935 (Pub. L. 74-255, 49 Stat. 543, August 9, 1935, now codified at 49 U.S.C. 31502(b)) (the 1935 Act) provides “the 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.” This final rule addresses “safety of operation and equipment” of motor carriers and “standards of equipment” of motor private carriers and, as such, is well within the authority of the 1935 Act. Today’s final rule allows motor carriers to use Electronic On-Board Recorders (EOBRs) in their commercial motor vehicles (CMVs) to document drivers’ compliance with the HOS requirements; requires some noncompliant carriers to install, use, and maintain EOBRs for this purpose; and updates existing performance standards for on-board recording devices.

The Motor Carrier Safety Act of 1984 (Pub. L. 98-554, Title II, 98 Stat. 2832, October 30, 1984) (the 1984 Act) provides concurrent authority to regulate drivers, motor carriers, and vehicle equipment. It requires the Secretary 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)).

Section 211(b) of the 1984 Act also grants the Secretary broad power, in carrying out motor carrier safety statutes and regulations, to “prescribe recordkeeping and reporting requirements” and to “perform other acts the Secretary considers appropriate” (49 U.S.C. 31133(a)(8) and (10)).

The HOS regulations are designed to ensure that driving time—one of the principal “responsibilities imposed on

operators of commercial motor vehicles”—does “not impair their ability to operate the vehicles safely.” (49 U.S.C. 31136(a)(2)). EOBRs that are properly designed, used, and maintained will enable motor carriers to track their drivers’ on-duty driving hours accurately, thus minimizing regulatory violations or excessive driving, and schedule vehicle and driver operations more efficiently. Driver compliance with the HOS rules helps ensure “the physical condition of operators of commercial motor vehicles is adequate to enable them to operate the vehicles safely” (49 U.S.C. 31136(a)(3)). To assist in the enforcement of the HOS regulations generally, FMCSA is requiring EOBR use by motor carriers with the most serious HOS compliance deficiencies (“threshold rate violations”), as described elsewhere in this final rule. The Agency considered whether this final rule would impact driver health under 49 U.S.C. 31136(a)(3) and (a)(4). To the extent the final rule has any effect on the physical condition of drivers, because the rule is expected to increase compliance with the HOS regulations the effect is unlikely to be deleterious. (See the discussion regarding health impacts at section 8.4, and Appendix A in the Environmental Assessment (EA).)

The requirements in 49 U.S.C. 31136(a)(1) concerning safe motor vehicle maintenance, equipment, and loading are not germane to this final rule, as EOBRs influence driver operational safety rather than vehicular and mechanical safety. Consequently, the Agency has not explicitly assessed the final rule against that requirement. However, to the limited extent 49 U.S.C. 31136(a)(1) pertains specifically to driver safety and safe operation of commercial vehicles, the Agency has taken this statutory requirement into account throughout the final rule. Also, before prescribing any regulations, FMCSA must also consider their “costs and benefits.” (49 U.S.C. 31136 (c)(2)(A) and 31502(d)). The Agency has taken these statutory requirements into account throughout the final rule.

In addition, section 408 of the ICC Termination Act of 1995 (Pub. L. 104-88, 109 Stat. 803, 958, December 29, 1995) (ICCTA) requires the Agency to issue an advance notice of proposed rulemaking (ANPRM) “dealing with a variety of fatigue-related issues pertaining to commercial motor vehicle safety (including * * * automated and tamper-proof recording devices * * *) not later than March 1, 1996.” The original ANPRM under section 408 of ICCTA was published on November 5,

1996 (61 FR 57252), the notice of proposed rulemaking (NPRM) on May 2, 2000 (65 FR 25540), and the final rule on April 28, 2003 (68 FR 22456). For a number of reasons, including lack of adequate cost and benefit data, FMCSA decided not to adopt EOBR regulations in 2003. FMCSA noted, however, that it planned “to continue research on EOBRs and other technologies, seeking to stimulate innovation in this promising area” (68 FR 22456, 22488, April 28, 2003).

Section 113(a) of the Hazardous Materials Transportation Authorization Act of 1994 (Pub. L. 103–311, 108 Stat. 1673, 1676, August 26, 1994) (HMTAA) required the Secretary to prescribe regulations to improve (A) compliance by commercial motor vehicle drivers and motor carriers with HOS requirements; and (B) the effectiveness and efficiency of Federal and State enforcement officers reviewing such compliance. HMTAA section 113(b)(1) states that such regulations must allow for a written or electronic document “* * * to be used by a motor carrier or by an enforcement officer as a supporting document to verify the accuracy of a driver’s record of duty status.” Today’s rule sets forth performance standards, incentives measures, and remedial requirements for use of devices that generate electronic documents, and addresses the HMTAA mandate.

Section 9104 of the Truck and Bus Safety and Regulatory Reform Act (Pub. L. 100–690, title IX, subtitle B, 102 Stat. 4181, 4529, November 18, 1988) also anticipates the Secretary prescribing “a regulation about the use of monitoring devices on commercial motor vehicles to increase compliance by operators of the vehicles with HOS regulations,” and requires the Agency to ensure any such device is not used to “harass vehicle operators” (49 U.S.C. 31137(a)). Section 4012 of the Transportation Equity Act for the 21st Century (Pub. L. 105–178), 112 Stat. 107, 408–409, June 9, 1998 (TEA–21) makes inapplicable to drivers of utility service vehicles, during an emergency period of not more than 30 days, regulations issued under 49 U.S.C. 31502 or 31136 regarding “the installation of automatic recording devices associated with establishing the maximum driving and on-duty times” (49 U.S.C. 31502(e)(1)(C)). The Agency has taken these statutory requirements into account throughout the final rule.

Based on the legislative framework reviewed previously, FMCSA has statutory authority to adopt an industry-wide requirement that all motor carriers subject to HOS requirements under 49 CFR part 395 install and use EOBR-

based systems. The Agency has adopted a more targeted approach in this final rule, consistent with the scope of the NPRM which limits the current rulemaking proceeding to compliance-based regulatory approaches implemented through a remedial directive. However, the Agency will publish a separate notice initiating a new rulemaking in the near future to consider expanding the scope of mandatory EOBR use beyond the standard set in this rule, consistent with its full authority and based upon new data and analyses.

In this final rule, the Agency establishes criteria for identifying carriers with threshold rates of HOS violations. We also establish changes to the safety fitness standard to ensure imposition of a remedial directive to install, use and maintain EOBRs is taken into account when determining a carrier’s safety fitness.

The determination of a carrier’s safety fitness is well within the Secretary’s authority. Section 215 of the 1984 Act requires the Secretary to “determine whether an owner or operator is fit to operate safely commercial motor vehicles,” (49 U.S.C. 31144(a)(1)) and to “maintain by regulation a procedure for determining the safety fitness of an owner or operator” (49 U.S.C. 31144(b)). The procedure must include “specific initial and continuing requirements with which an owner or operator must comply to demonstrate safety fitness” (49 U.S.C. 31144(b)(1)).

Section 4009 of TEA–21 prohibits motor carriers found to be unfit, according to a safety fitness determination, from operating commercial motor vehicles in interstate commerce. With limited exceptions, owners and operators determined to be unfit may not operate commercial motor vehicles in interstate commerce beginning on the 61st day after the date of such fitness determination, or the 46th day after such determination in the case of carriers transporting passengers or hazardous materials, “and until the Secretary determines such owner or operator is fit” (49 U.S.C. 31144(c)).

Section 4104 of the Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users (Pub. L. 109–59, 119 Stat. 1144, August 10, 2005) (SAFETEA–LU) directs FMCSA to revoke the registration of a motor carrier that has been prohibited from operating in interstate commerce for failure to comply with the safety fitness requirements of 49 U.S.C. 31144. Section 4114(b) of SAFETEA–LU expands FMCSA jurisdiction into intrastate operations by amending 49 U.S.C. 31144(c) to further prohibit

owners or operators of CMVs prohibited from operating in interstate commerce because FMCSA has determined they do not meet the safety fitness requirement, from operating any CMV that affects interstate commerce until the Secretary determines that such owner or operator is fit.

III. Executive Summary

In its January 18, 2007 NPRM (72 FR 2340), FMCSA proposed three related elements to address on-board electronic devices for recording HOS information: (1) An updated equipment standard in light of technological advances; (2) mandated use of EOBRs for motor carriers that demonstrated a history of severe noncompliance with the HOS regulations; and (3) certain incentives to encourage EOBR use by all motor carriers. The second element, concerning the mandated use of EOBRs, was of greatest concern to commenters.

The FMCSA acknowledges the safety concerns of Congress, the National Transportation Safety Board (NTSB), and the many organizations and individuals that submitted comments to the NPRM in support of a broader EOBR mandate. The Agency has begun work to evaluate regulatory options for significantly expanding the population of carriers covered by an EOBR mandate.

However, the Agency cannot extend the EOBR mandate beyond those covered by this final rule because the scope of the current rulemaking proceeding is limited to compliance-based regulatory approaches, implemented through a remedial directive. Therefore, FMCSA will examine the issue of a broader mandate under a new rulemaking proceeding in response to the safety concerns raised by Congress, the NTSB, and commenters to the docket.

As part of this activity, FMCSA also intends to gather more information on the voluntary use of EOBRs and to assess how increases in the number of units installed are influencing the costs of purchase and operation.

In the meantime, focusing on motor carriers with significant HOS compliance problems is likely to improve the safety of the motoring public on the highways in the near term. Consistent with the scope of the NPRM, we are therefore adopting procedures for issuance of remedial directives requiring EOBR installation, maintenance, and use by those motor carriers with serious HOS noncompliance.

As discussed in the EOBR Remedial Directives section of this preamble, FMCSA examined a variety of

parameters that might be used to establish subpopulations of motor carriers with poor HOS compliance to which an EOBR mandate might apply. In focusing on the most severe violations and the most chronic violators, we are adopting a mandatory-installation “trigger” designed to single out motor carriers that have a demonstrated record of poor compliance with HOS regulations. In today’s rule, as proposed in the NPRM, we adopt an EOBR mandatory-use requirement with a compliance-based trigger. It applies to motor carriers across all sectors that have demonstrated poor compliance with the HOS regulations. The NPRM details the history of this rulemaking and the alternatives considered (72 FR 2343).

Previously, an Agency proposal to mandate EOBRs for CMVs used in long-haul and regional operations was withdrawn (68 FR 22456, Apr. 28, 2003). The 2004 ANPRM (69 FR 53386) invited comment on a sector-based mandate (e.g., long-haul carriers only). FMCSA considered such broader mandates and discussed them again in the NPRM, although they were not ultimately pursued as regulatory options. Instead, the NPRM focused on which remedial directive option to adopt (72 FR 2372–2374).

The Agency proposed mandating EOBR installation, maintenance, and use for a relatively small population of companies and drivers with a recurrent HOS compliance problem. EOBRs would be required for those carriers determined—based on HOS records reviewed during each of two compliance reviews conducted within a 2-year period—to have had a 10 percent or greater violation rate (“pattern violation”) for any regulation in the proposed Appendix C to 49 CFR part 385 (“2 x 10” Remedial Directive Carriers). As described in more detail in this preamble, in the final rule the Agency has chosen the more stringent 1 x 10 remedial approach—whereby motor carriers with a 10 percent violation rate of any Appendix C HOS regulation in any single compliance review would be subject to a remedial directive (“1 x 10” Remedial Directive Carriers)—instead of the 2 x 10 approach proposed in the NPRM.

In the development of this final rule, the Agency found the overall crash rates of 1 x 10 and 2 x 10 motor carriers are considerably higher than the crash rates of the general motor carrier population. Using data from the FMCSA Motor Carrier Management Information System (MCMIS) database and compliance review databases, crash rates were computed by dividing total crashes by

each carrier’s number of power units. Crash rates were compared between the 1 x 10 and 2 x 10 motor carrier population and motor carriers in the general population. The 1 x 10 motor carriers were found to have a 40 percent higher crash rate than the general motor carrier population, and 2 x 10 motor carriers a 90 percent higher crash rate than the general motor carrier population. Many elements of the analyses of benefits and costs of this rule use estimates that were derived from FMCSA’s 2003 estimates concerning the effects of HOS rules. This was done to provide analytical continuity through the 2004–2010 timeframe of the EOBR rulemaking actions.¹ Also, due to data limitation, FMCSA used outdated studies in the analysis for this rule. For future HOS rulemakings, FMCSA will use updated studies and reports to analyze impacts.

Numerous commenters to the NPRM stated that the proposal still would not require EOBR use by enough carriers to make a meaningful difference in highway safety, relative to the total carrier population. The FMCSA acknowledges the safety concerns of the commenters. In response to those concerns, the Agency will explore the safety benefits of a broader EOBR mandate in a new rulemaking proceeding that will begin in the near future. In the meantime, the final rule’s application of a remedial directive to the 1 x 10 motor carriers makes the best immediate use of Agency resources and provides immediate safety benefits to society.

The number of motor carriers that will be required to install, use and maintain EOBRs is significantly greater under this final rule than was proposed in the NPRM. If FMCSA determines, based on HOS records reviewed during a single compliance review, that a motor carrier had a 10 percent or greater violation rate for any regulation in the new Appendix C to Part 385 (“threshold rate violation”), FMCSA will issue the carrier an EOBR remedial directive. The motor carrier will be required to install EOBRs meeting the performance requirements of this final rule in all of the carrier’s CMVs, regardless of their date of manufacture, and to use the devices for HOS recordkeeping purposes for a period of 2 years. An exception is provided for carriers that, prior to the compliance review determination, already equipped their vehicles with automatic on-board recording devices (AOBRDs) meeting

the Agency’s current requirements under 49 CFR 395.15 and can demonstrate to FMCSA that their drivers understand how to use the devices.

FMCSA amends the FMCSRs to provide new performance requirements for EOBRs used to monitor drivers’ HOS recording devices. EOBRs will be required to automatically record the CMV’s location at each change of duty status and at intervals while the CMV is in motion. Current on-board recorders are not required to do this. EOBRs must also conform to specific information processing standards to ensure the security and integrity of the data that is recorded. Drivers will be able to add information to the EOBR record (“annotate”) while the EOBR maintains the original recorded information and tracks these annotations. The EOBR support system must be able to provide a digital file in a specified format for use by motor carrier safety enforcement officials.

FMCSA requires on-board recording devices be integrally synchronized to the engine. Although the January 2007 NPRM proposed allowing non-synchronized devices, the Agency decided to continue requiring that on-board recording devices be integrally synchronized to ensure the accuracy of electronic records of duty status.

The Agency also adopts other performance specifications, in response to comments that differ from specifications proposed. These include, but are not limited to: Increasing the time interval for recording the geographic location of a CMV in motion from 1 minute to 60 minutes; making the recording of State-line-crossing information optional; removing the requirement to record a driver’s acknowledgement of advisory messages; reducing the amount of time a CMV is stationary before the EOBR defaults to on-duty not driving duty status; removing the daily ceiling on EOBR accumulated time inaccuracy or “time drift”; revising the requirements to allow a driver to enter annotations to denote use of a CMV as a personal conveyance and for yard movement; removing the requirement for an EOBR to display HOS data in a graph-grid format; specifying information technology security and integrity requirements; and adding and strengthening provisions concerning driver and motor carrier responsibilities relating to accurate EOBR records and support system performance. The details of the changes are discussed later in this document.

To ensure a smooth transition from AOBRDs to EOBRs, the final rule requires that for CMVs manufactured

¹ Estimates of benefits and costs that will be developed for future HOS-related rulemaking actions will use more recent baseline data.

after June 4, 2012, devices installed by a manufacturer or motor carrier to record HOS must meet the requirements of § 395.16. Commercial motor vehicles manufactured prior to June 4, 2012 may be equipped with an HOS recording device that meets the requirements of either § 395.15 (AOBRD) or § 395.16 (EOBR).

Finally, the final rule provides incentives for motor carriers to voluntarily use EOBRs. These include elimination of the requirement to retain and maintain supporting documents related to driving time as this information will be maintained and accessible from the EOBR. Additionally, compliance reviews that reveal a proposed 10 percent or higher violation rate based on the initial focused sample would be expanded to assess a random sampling of the motor carrier's overall HOS records.

Summary of FMCSA's January 2007 Proposal

On January 18, 2007, FMCSA proposed amending the FMCSRs to incorporate new performance standards for EOBRs installed in commercial motor vehicles manufactured on or after the date 2 years following the effective date of a final rule. On-board HOS recording devices meeting FMCSA's current requirements and voluntarily installed in CMVs manufactured before the implementation date of a final rule will be permitted for use for the remainder of the service life of those CMVs.

Under the proposal, motor carriers that demonstrated a pattern of serious noncompliance with FMCSA's HOS rules would be subject to mandatory installation of EOBRs meeting the new performance standards. If FMCSA determined, based on HOS records reviewed during each of two compliance reviews conducted within a 2-year period, that a motor carrier had a 10 percent or greater violation rate ("pattern violation") for any regulation in proposed Appendix C to part 385 of Title 49, CFR, FMCSA would issue the carrier an EOBR remedial directive. The motor carrier would be required to install EOBRs in all of its CMVs regardless of their date of manufacture and to use the devices for HOS recordkeeping for a period of 2 years, unless the carrier already had equipped its vehicles with AOBRDs meeting the Agency's current requirements under 49 CFR 395.15 and could demonstrate to FMCSA that its drivers understand how to use the devices.

We also proposed changes to the safety fitness standard to ensure imposition of a remedial directive to

install, use and maintain EOBRs as taken into account when determining a carrier's safety fitness. Finally, FMCSA proposed the same incentives for motor carriers to voluntarily use EOBRs in their CMVs as are adopted in today's final rule: (1) Random sampling of drivers' records of duty status; and (2) partial relief from HOS supporting documents requirements.

IV. Discussion of Comments to the NPRM

Overview of Comments

The Agency received 752 comments on the proposed rule. Of these, 609 expressed opinions without additional supporting material.

Organizations that provided comments included the following.

Safety advocacy groups: Advocates for Highway and Auto Safety (Advocates); Public Citizen; and Insurance Institute for Highway Safety (IIHS).

Drivers' organizations: International Brotherhood of Teamsters (IBT) and Owner-Operator Independent Drivers Association, Inc. (OOIDA).

National trucking industry associations: Canadian Trucking Alliance; Truckload Carriers Association (TCA); American Trucking Associations (ATA); National Private Truck Council, Inc. (NPTC); the Specialized Carriers & Rigging Association (SC&RA), and the American Moving and Storage Association (AMSA). Additionally, although several commenters referenced a Technical Policy Advisory (TPA) developed by the ATA Technology and Maintenance Council (TMC), TMC did not comment independently to the docket.

State trucking associations: Minnesota Trucking Association (MTA).

EOBR, software, and system providers: RapidLog Corp. (RapidLog); PeopleNet; Siemens AG (Siemens); Tripmaster Corp. (Tripmaster); Xora, Inc. (Xora); First Advantage; Verigo Inc. (Verigo); XATA Corp. (XATA); Qualcomm Wireless Business Solutions (Qualcomm); KonaWare Transportation and Logistics (KonaWare), and Report on Board.

U.S. Government agencies: National Transportation Safety Board (NTSB) and the U.S. Department of Energy (DOE).

CMV safety officials' organization: Commercial Vehicle Safety Alliance (CVSA).

State government agencies: Maryland State Police, Maryland State Highway Administration (Maryland SHA), and Public Utilities Commission of Ohio (Ohio PUC).

Motor carriers: J.B. Hunt Transport, Inc. (J.B. Hunt); FedEx Corp. (FedEx);

Werner Enterprises, Inc. (Werner); Calvary Mountain Express Inc.; River Transport, Inc.; Boyle Transportation (Boyle); OTR Transportation; Maverick Transportation, LLC (Maverick); Metro Express Inc.; Brenny Specialized, Inc.; Foreman Transport; Horizontal Boring & Tunneling Co.; and N&M Transfer Co., Inc.

National associations with transportation interests: International Foodservice Distributors Association; National Propane Gas Association (NPGA); National Ready Mixed Concrete Association (NRMCA); Petroleum Transportation and Storage Association; Petroleum Marketers Association of America (PMAA); and, the Food Marketing Institute (FMI).

State association with transportation interests: Colorado Ready Mixed Concrete Association.

CMV manufacturer: International Truck and Engine Corp.

1 Industry-Wide Mandate for EOBRs

FMCSA received 57 comments, mainly from drivers or individuals, who believe the Agency should require the use of EOBRs. Thirty-nine commenters supported a broader mandate than was proposed in the NPRM, though not an industry-wide mandate. Nineteen commenters supported mandating EOBRs for all carriers.

Advocates commented, "enforcement efficiencies would soar with universal use of accurate, tamper-proof EOBRs," and argued that the increased productivity of roadside inspection officials could significantly improve motor carrier safety. Several commenters, including CVSA, NTSB, and Public Citizen, asserted European Union nations, Japan, and other countries that require EOBRs have seen positive safety results.

Ohio PUC stated a mandate would greatly increase compliance with the HOS rules, increase safety, and reduce the potential for fraud.

Public Citizen, Advocates, and two vendors stated the proposed rule did not meet the statutory mandate or individual guidance concerning an evaluation of EOBRs, and that the administrative record of FMCSA's own rulemakings contradicted the proposal. They noted the Agency was required to consider safety as its highest priority and to further the highest degree of safety in motor carrier transportation.

IIHS stated the proposed rule was "completely at odds with the data on truck driver fatigue." IIHS cited its research that found that one in five drivers fell asleep at the wheel in the previous month.

DOE supported the NPRM, but preferred an industry-wide mandate for EOBR use to enhance the safety, security and cost effectiveness of the transportation of hazardous materials. DOE believes installation of EOBRs on all CMVs would enhance highway safety and HOS compliance of all motor carriers, including those that DOE uses to transport shipments of radioactive materials and waste.

Numerous commenters argued that EOBRs are needed to improve safety, but motor carriers will not voluntarily choose to use EOBRs. In a related vein, CVSA, NTSB, Siemens, and Report on Board believed a mandate for all motor carriers to use EOBRs would be necessary to obtain the customer base and economies of scale for vendors to offer lower-cost EOBRs.

An individual who identified himself as a safety consultant argued that motor carriers would not see sufficient advantages—either through reduced instances of noncompliance or reductions in paperwork burdens—to encourage them to use EOBRs voluntarily, especially since their chance of being subjected to a compliance review is low. He stated many progressive motor carriers have installed onboard systems with Global Positioning System (GPS) tracking capabilities but do not use them for HOS recording because drivers object to it. The consultant contended that by not mandating universal EOBR use, the DOT is, in effect, rewarding those who are unwilling to invest in safety.

IIHS stated that although AOBRDs have been allowed since 1988 and a substantial number of motor carriers use various types of on-board systems, only a small proportion of carriers use them to collect HOS data. As evidence that many motor carriers find EOBRs affordable and provide many operational benefits, IIHS cited surveys of truck drivers indicating about 45 percent of the long-distance drivers in 2005 said there were EOBRs or other on-board computers in their trucks, up from about 18 percent in 2003 and about 38 percent in 2004.

Some of the commenters believed a universal EOBR mandate would create a “level playing field” in the motor carrier business environment. They also stated it would protect drivers from adverse actions by their employers in retaliation for refusing to violate HOS regulations. Some of the commenters also mentioned improved readability and simplified recordkeeping associated with EOBRs when compared to handwritten records, as well as assisting motor carrier safety enforcement personnel in performing

their roadside reviews more efficiently and effectively.

Advocates stated FMCSA had ignored potential health impacts of using EOBRs and improving HOS compliance. It said FMCSA’s concern about the stress on drivers from using EOBRs distorted the research results of several studies. Furthermore, Advocates held, by not proposing to mandate EOBR use, the Agency was not helping “to ameliorate the adverse health impacts of exceptionally long working and driving hours triggered by the Agency’s final rules in 2003 and in 2005.”

Response: We understand the concerns of ATA and J.B. Hunt, among others, who believe the proposal did not cover enough carriers. While FMCSA acknowledges the safety concerns of those that support an industry-wide EOBR mandate, the Agency cannot extend the EOBR mandate in that manner in this final rule because the scope of the current rulemaking proceeding is limited to a compliance-based regulatory approach, implemented through a remedial directive. However, the number of motor carriers that will be required to install, use and maintain EOBRs is significantly greater under this final rule—using the 1 x 10 trigger—than under the 2 x 10 trigger that was proposed in the NPRM.

FMCSA recognizes that the potential safety risks associated with some motor carrier categories, including passenger carriers, hazardous materials transporters, and new entrants, are such that mandatory EOBR use for such populations might be appropriate. However, as noted above, in today’s rule, we adopt a compliance-based trigger that focuses on all HOS-violating motor carriers across all sectors as proposed in the NPRM. In addition, as some commenters to the 2007 NPRM docket indicated, a regulation that promotes voluntary use of EOBRs, but that does not mandate it for the majority of carriers, will not persuade many carriers to adopt the devices, even though the devices may generate improvements in operational productivity. And, as other commenters noted, a more universal approach to EOBR use may create a more level playing field in the industry.

As stated earlier in this document, the Agency will initiate a new rulemaking to consider expanding the scope of mandatory EOBR use beyond the “1 x 10” carriers that will be subject to a remedial directive as a result of today’s rule.

FMCSA acknowledges that some foreign countries have an industry-wide mandate for HOS recording devices.

However, the Agency is not aware of any published information that demonstrates that the specific mandate imposed by those countries has contributed to any discernible benefits in safety. Still, the absence of published information by those governments should not preclude consideration of that regulatory option for the U.S. What is clear is certain motor carriers with threshold rates of serious HOS violations have much higher than average crash rates, and the mandatory use of EOBRs via a remedial directive for these high-risk carriers provides a means to compel such carriers to achieve compliance with the HOS rules.

In terms of the benefits to motor carriers arising from EOBR use, FMCSA agrees that the savings in collecting, reviewing, and storing paper-based information alone can make EOBRs (and AOBRDs) attractive to many motor carriers. Furthermore, advances in information technology (particularly Web-based applications) and wireless telecommunications are making HOS monitoring applications—either in stand-alone form or as part of fleet management systems—far less costly on a per-power-unit basis than they were in the past.

Until several years ago, many on-board recording systems suppliers did not serve the small-fleet market, which, according to FMCSA’s motor carrier census, makes up most of the population of motor carriers: approximately 90 percent of motor carriers operate fewer than 20 power units. The picture is vastly different today. It is not only more economical for motor carriers to use on-board recording and monitoring systems, but there are far more suppliers of these systems to choose from. Vendors anticipate that customers have a substantial demand that they can meet, and they are meeting that demand without an FMCSA mandate. The revised EOBR systems cost estimates discussed in the Rulemaking Analyses and Notices section of this document and the RIA reflect these advancements.

In response to Advocates’ comments on potential health impacts of EOBR use, the Agency has addressed both positive and negative health impacts in Appendix A of the EA for this rule, which has been placed in the docket. The Agency carefully reviewed research on the potentially negative impacts of electronic monitoring and concluded that use of EOBRs required in today’s final rule will not result in negative impacts on driver health for two reasons: First, because monitoring of HOS compliance is an existing, not a new, requirement; and second, because

the Agency is requiring EOBRs to monitor safety, not workplace productivity. The underlying HOS regulations are the subject of a separate rulemaking action. Cost and benefit estimates of the HOS regulations are included in the analysis for that separate rulemaking (72 FR 71247, December 17, 2007).

2 General Opposition to Mandated Use of EOBRs

One hundred thirty-six commenters, the majority of whom were drivers or individuals, generally opposed any mandated use of EOBRs. The SC&RA, TCA, IBT, AMSA, and a driver claimed that FMCSA had not demonstrated EOBR use would improve highway safety. SC&RA questioned FMCSA's estimates in the RIA, concerning relationships between improvements in HOS compliance and improvements in safety outcomes resulting from use of EOBRs.

Several commenters criticized the Agency for failing to produce any definitive studies demonstrating the safety benefits of EOBRs. Some of these commenters cited the University of Michigan Transportation Institute (UMTRI) or American Transportation Research Institute (ATRI) studies which concluded that safety benefits were difficult to assess due to lack of empirical data. SC&RA stated that a 2006 study by ATRI did not identify safety benefits. OOIDA likewise criticized the RIA for assuming EOBRs would improve compliance rather than demonstrating that improvement would, in fact, occur. It also quoted a 1998 UMTRI study concluding EOBRs would have little or no effect on safety.

Forty of the 136 commenters stated FMCSA failed to prove that using EOBRs reduced driver fatigue, prevented or reduced the severity of accidents, or lowered operational costs. IBT expressed concern that employers would use EOBR data to pressure drivers to improve their operational productivity by driving faster and making shorter stops.

Gantec Trucking stated FMCSA has not shown that strict compliance with HOS limits improves safety, considering that accidents in which the CMV driver is at fault and fatigue-related accidents make up a very small percentage of CMV-involved accidents. Gantec criticized FMCSA for citing a lack of evidence to support strengthening driver training regulations but not holding itself to the same standard for proposing EOBR use. Some drivers believe EOBRs could make drivers less safe because they believe the accuracy of an EOBR's record would force them

to continue driving when they would prefer to take a break: With paper Records of Duty Status (RODS), drivers can take breaks as needed but not necessarily record them. Others questioned how EOBRs could improve safety because they cannot automatically detect or record non-driving activity. IBT stated because drivers would still need to enter non-driving time, they would still falsify their electronic records, because it is to their benefit to do so.

Response: FMCSA disagrees with commenters that believe there are no circumstances under which the use of EOBRs should be mandated. The Agency believes the safety records of carriers found to have certain threshold rates of violations of the HOS rules are a strong indicator of the need to do more than issue civil penalties. The final rule requires such carriers to install, use and maintain EOBRs to better ensure their drivers comply with the applicable HOS requirements and provides a means for prohibiting these motor carriers from continuing to operate CMVs in interstate commerce if they fail to comply with the remedial directive. This action is a significant first step toward strengthening the enforcement of the HOS rules for carriers with threshold rates of noncompliance.

The use of electronic records allows deviations from safety and operational norms to be made more visible because they can be detected far more rapidly than with paper records. Also, the electronic records will enable motor carriers to develop safety or operational countermeasures to address these deviations more efficiently and effectively. However, the Agency does not accept the assertion that drivers would not take breaks from driving because those breaks would be recorded.

3 EOBR Remedial Directive

3.1. Applicability of the Remedial Directive

The Minnesota Trucking Association, AMSA, and one individual supported requiring EOBRs only for motor carriers with a demonstrated a history of serious noncompliance with the HOS rules.

In contrast, J.B. Hunt and many other commenters stated the proposed threshold would not capture enough carriers to serve as a meaningful deterrent to noncompliance or to positively influence highway safety outcomes. ATA stated that the method described in the NPRM for determining whether a remedial directive should be issued is not likely to dissuade the bulk of the egregious or defiant HOS

offenders. ATA recommended focusing on at least the top 10 percent most egregious HOS violators. This population could be determined by use of valid compliance review data and, potentially, driver out-of-service rates for HOS violations from roadside inspection data. ATA further recommended, prior to taking remedial action, FMCSA provide motor carriers an adequate warning period to give them an opportunity to institute improved safety management controls. If improvement benchmarks were not adequately attained, then more severe enforcement action would be warranted.

OOIDA stated the proposed rule would punish only those carriers that keep accurate records of their noncompliance and would not punish the worst offenders who do not comply and who disguise their violations.

Numerous commenters including Maverick and Werner stated the requirement should apply to the driver rather than to the carrier. Such commenters argued that if most of a carrier's drivers are not in violation, mandating an EOBR for the carrier penalizes compliant drivers, which increases the cost. Also, if the remedial directive is applied to a carrier, the non-compliant drivers will simply go to another carrier to avoid using the EOBR, which effectively nullifies the potential benefits from mandating EOBR use.

Werner stated carriers are limited to taking after-the-fact compliance and enforcement actions against their drivers. The carrier should not be penalized for the actions of non-compliant drivers whom it no longer employs if the carrier has made an effort to deal with the drivers' HOS issues during their employment. ATA stated a record of HOS noncompliance should follow the driver and should only be considered in assessing the compliance status of the motor carrier where the driver is currently employed. ATA argued, "Penalties for EOBR violations should be proportional for all responsible parties, with special attention for tampering with the devices and the data."

The National Propane Gas Association (NPGA) asserted motor carriers transporting placardable quantities of hazardous materials, taken as a whole, do not represent a risk greater than non-hazmat carriers and should not be required to use EOBRs. Conversely, Advocates believes the inherently higher safety and security risks posed by hazardous materials transportation and the special safety concerns related to passenger motorcoach transportation, justify mandatory EOBR use for both categories of motor carriers.

OOIDA and three individuals objected to the trigger for imposition of a remedial directive because they believe the directives would disproportionately affect smaller companies. The individuals noted a company with very few trucks could be required to install EOBRs if only one driver is put out-of-service, while a large company could have many such drivers and not be targeted. Moreover, where a minority of drivers is out of compliance, the innocent majority of the carrier's drivers would be punished by a company-wide mandate. OOIDA asked if new entrant safety audits would be included in the compliance reviews (CRs) considered for the trigger; if so, it argued, small businesses would be severely affected because most new entrants are small operations. J.B. Hunt suggested FMCSA consider requiring new entrants to use EOBRs for a minimum period.

NTSB stated encouraging carriers to view EOBRs as a means of punishment would undermine the goal of industry-wide acceptance; such broad acceptance would result in greater safety for all motorists. Boyle Transportation agreed the punitive nature of the remedy would be a disincentive for carriers to install them.

Some commenters focused on the perceived underlying problem—the need for stronger HOS enforcement. According to Public Citizen, the onus is still on the Agency to commit to improving enforcement of HOS compliance. Advocates stated the rule would not address the pervasive nature of HOS violations. It stated RoadCheck 2006 found there was an upward trend in the number of HOS violations even though the new HOS rules adopted in 2003 allowed drivers to work longer hours. CVSA agreed that a more effective option for dealing with the habitual HOS offenders is stronger enforcement. They also noted HOS noncompliance is indicative of a systemic management problem within the carrier's operation, and the mere installation of EOBRs will not correct this problem. Finally, CVSA noted that government resources needed to monitor carriers subject to mandatory EOBR use will be substantial, and the benefits will not outweigh the costs.

Response: In its September 2004 ANPRM (69 FR 53386), the Agency requested commenters to address the scope of the EOBR requirement. Specifically, the Agency requested comment on whether it should: "Propose requiring that motor carriers in general, or only certain types of motor carrier operations, use EOBRs." 69 FR 53395. The Agency received numerous comments on this issue. In the 2007

NPRM the Agency noted it had the legal authority to adopt an industry-wide standard that all motor carriers subject to the HOS requirements use EOBRs. The Agency announced it would not exercise "the full extent of its authority at this time, however, and [would] instead propose a more targeted approach of mandating EOBR use for only those carriers with deficient safety management controls, as demonstrated by repeated patterns of hours-of-service violations." 72 FR 2341. The final rule, similarly, does not require all carriers to install and use EOBRs, but, consistent with the NPRM, targets only those carriers with substantial HOS noncompliance and associated deficient safety management controls. This final rule makes one significant change to the remedial directive provisions in the proposed rule, concerning the HOS noncompliance threshold triggering a remedial directive for a motor carrier. The NPRM proposed a so-called "2 x 10" approach as the "trigger" for a remedial directive. That approach would have required a final determination of one or more "pattern violations" of any regulation in proposed new Appendix C to part 385 ("Appendix C regulations") during a CR, followed by the discovery of one or more pattern violations of any Appendix C regulation during a CR completed within 2 years after the closing date of the CR that produced the first determination. We explained in the NPRM that a pattern violation would be "a violation rate equal to or greater than 10 percent of the number of records reviewed. For example, 25 violations out of 100 records reviewed would be a 25 percent violation rate and therefore a pattern violation. This trigger, if adopted, would result in the issuance of approximately 465 remedial directives to install EOBRs annually." 72 FR 2364. The Agency justified mandating EOBRs on this subpopulation of carriers, given that these carriers' "severe" HOS compliance deficiencies "pose a disproportionate risk to public safety." *Id.*

After reconsidering the alternatives discussed in the NPRM (72 FR 2374) including the proposed "2 x 10" remedial directives trigger, and based on comments received, the Agency adopts the considerably more stringent "1 x 10" requirement. As discussed in more detail below, we agree with the numerous commenters, including government agencies, carriers, industry associations, and safety groups, that the proposed 2 x 10 trigger would not mandate EOBR use by enough carriers, given the total population. Under the requirement adopted today, carriers

with a 10 percent violation rate of any HOS Appendix C regulations in any single CR will be subject to a remedial directive. Approximately 5,419 carriers and 104,428 power units on average will be subject to this directive per year. This represents a substantial increase in the number of remediated carriers compared to the 2 x 10 proposal, as further explained in the RIA and section 8, below. The crash rate for such carriers is more than double the industry average, (although the crash rate is slightly lower for the entire 1 x 10 group than it was for the 2 x 10 group because of the larger pool of carriers subject to the remedial directive). However, FMCSA anticipates the 1 x 10 approach finalized today will result in greatly increased HOS compliance, and therefore safety, in a cost-effective manner.

The Agency is revising the new 49 CFR 385.803 definitions and acronyms section and other affected rule text to replace the term "pattern" violation with the term "threshold rate" violation. Concern was raised that use of the term "pattern violation" in the final rule might lead to confusion with other "patterns" of violations in the FMCSRs and the Agency's enforcement structure. In addition, the Agency believes the term "pattern" is more aptly applied to the proposed 2 x 10 trigger, which required a finding of serious HOS violations in multiple CRs. Under the final rule, the finding of a 10 percent violation rate for an Appendix C regulation in a single CR will serve as the trigger for issuance of a remedial directive.

Two factors that were not operative in the NPRM analysis influenced the final rule. First, section 4114 of SAFETEA-LU was codified in the FMCSRs on July 5, 2007, approximately 6 months after the EOBR NPRM was published (72 FR 36762 (preamble) and 36788 (regulatory text) amending 49 CFR 385.7(c), (d), (f), and (g)). Prior to the enactment of section 4114, although motor carriers were required under 49 CFR 390.15 to record intrastate accidents on their accident registers, FMCSA did not take intrastate accidents or safety violations into account when determining motor carriers' safety ratings. Under section 4114, FMCSA must now utilize interstate motor carriers' accident and safety inspection data from intrastate operations (and from operations in Mexico or Canada if the carrier also has U.S. operations) in determining carriers' safety fitness under 49 U.S.C. 31144. This includes safety inspection data on HOS violations while operating in intrastate commerce. As a result of this larger universe of violations under

consideration in the safety fitness determination process, the number of carriers subject to the 1 x 10 remedial directive is now slightly higher than it would have been prior to enactment of section 4114.

Second, after issuance of the NPRM, DOT made an important change to its evaluation of safety benefits for all safety rules. This policy has caused the Agency to revisit the cost benefit analyses for all rules being developed, including the EOBR rule. Specifically, on February 5, 2008, DOT issued a memorandum to its modal agencies instructing them to estimate the economic value of preventing a human fatality at \$5.8 million. See "Economic Value of a Statistical Life in Departmental Analyses" (available at <http://ostpxweb.dot.gov/policy/reports/080205.htm>). FMCSA also published a notice in the **Federal Register** describing this policy change (73 FR 35194, June 20, 2008). The previous value of a statistical life (VSL), which was used in the RIA for the EOBR NPRM, was \$3.0 million. Given that the VSL nearly doubled, the net benefits of this rule, as well as those of other FMCSA rules under development, were recalculated using the new figures. This recalculation resulted in a reappraisal of all appropriate alternatives by the Agency, taking into account Agency analyses concerning safety impacts, enforcement resources, and data and comments received.

We fundamentally disagree with OOIDA's comment that this rule mandates EOBRs merely for those carriers who keep records. In addition to other HOS violations, failure to maintain and preserve records of duty status in accordance with part 395 and falsification of records are among the 24 separate violations in new Appendix C that will trigger a remedial directive if violated at the threshold rate of 10 percent or greater. Other issues related to supporting documents are discussed under the heading "Incentives," section 7, below. Also, the revised trigger applies to the same carriers as proposed in the NPRM, namely those that fail to meet their part 395 compliance obligations. But we anticipate the final rule will result in the issuance of a significantly larger number of remedial directives because directives can be triggered after a single compliance review in which the motor carrier is found to meet or exceed the violation rate threshold, rather than after a second CR that would take place as much as 24 months after the initial set of threshold violations are found.

As previously mentioned, some carriers objected to having EOBRs

imposed based on the actions of HOS-noncompliant drivers who might no longer be employed at the motor carrier affected. FMCSA disagrees with this position. A key to addressing the issue of non-compliant drivers is for motor carriers to exercise proper management controls. These controls should include, for example, a process for conducting adequate background checks prior to employing a new driver and ensuring that new drivers are adequately trained. Likewise, if a carrier has adequate management controls over driving operations, HOS violations at a rate greater than 10 percent should not occur in the first place. To ensure consistent oversight, FMCSA and its State enforcement partners must conduct compliance reviews based on the drivers employed during the review period in question. Subsequent adjustments in a non-compliant driver's employment status or a motor carrier's pool of employees should not influence the remedial directive determination.

At this time, the Agency elects not to require EOBRs for all new entrants or hazardous material (hazmat) carriers because these regulatory options are beyond the compliance-based scope of the current rulemaking proceeding. The Agency acknowledges the concerns of commenters, and plans to consider these options in preparation for a new rulemaking examining the expansion the EOBR mandate.

The remedial directive element of this final rule treats hazmat carriers, along with passenger carriers, differently from other carriers, consistent with our authority to determine safety fitness of carriers under 49 U.S.C. 31144 (c)(2)–(3) and 49 CFR part 385. As discussed in our NPRM (72 FR 2376) and set forth in this final rule, passenger and hazmat carriers will have only 45 days to install EOBRs after receiving a remedial directive under § 385.807(b)(1). As with the current regulations under part 385, the shorter period reflects the relatively higher risk to the traveling public (passenger carriers) and to safety and security (hazmat) of these carriers' operations. Non-hazmat property carriers will have 60 days to comply under § 385.807(b)(2). Both provisions are adopted as proposed.

As to applicability of the rule to new entrant carriers, CRs are not normally conducted on new entrant carriers, which are subject to a safety audit within the 18-month duration of the new entrant program. However, enforcement personnel have the discretion to follow up on a poor safety audit by conducting a separate CR. Therefore, new entrants, like other carriers that must comply with part 395,

can be subject to a remedial directive under a scenario where the audit leads to a CR.

We disagree with the characterization of a remedial directive to install EOBRs company-wide as a "punishment" for the innocent drivers who had no violations. The directive is intended to correct a demonstrated deficiency in the motor carrier's safety management controls and is therefore remedial, not punitive, in nature. This rule does not revise or impose any new civil penalties, including penalties for HOS violations. Moreover, drivers required to use EOBRs will actually benefit from a technology that allows for automation of a manual task that would otherwise burden the driver. As noted elsewhere, this rule also does not "target" any specific industry sector or particular size of motor carrier operation; instead, it focuses on carriers with substantial HOS compliance issues.

We respectfully disagree that this final rule on EOBRs will have no impact on HOS enforcement, since the rule improves the means of detecting HOS violations within a problem motor carrier population and thus enhances HOS enforcement.

3.2 Trigger for Remedial Directive

J.B. Hunt stated that, although the idea of mandating the least compliant and least safe carriers to use an EOBR appears to be a logical approach, there are problems with this method. It relies on the premise that all of the "least compliant" carriers have undergone, or soon will undergo, a CR. They disagreed with this premise, noted many carriers are unrated, and asserted the NPRM approach assumes the Agency is uncovering the least safe carriers through its log book sampling. However, according to J.B. Hunt, the Agency is merely selecting from a group of drivers, not carriers, who have had past compliance problems.

NTSB objected to using CRs to trigger remedial directives because so few CRs are done relative to the number of carriers and because carriers may be rated Satisfactory despite long and consistent histories of violations. Advocates and Public Citizen also cited the limited number of CRs conducted each year, which they said meant that the "pattern of violations" cannot be meaningful. Siemens agreed with this position.

Advocates added that carriers are selected for CRs using data from SafeStat, which is deficient in several ways, as noted by the DOT Office of the Inspector General (OIG) and the Government Accountability Office (GAO). Advocates contend that relying

on CR data results in severe underestimation of HOS violations. Advocates cite OIG's 2006 conclusion that without the critical data, FMCSA cannot accurately identify the high-risk motor carriers for CRs and enforcement actions (see "Significant Improvements in Motor Carrier Safety Program Since 1999 Act But Loopholes For Repeat Violators Need Closing," FMCSA Report Number MH-2006-046, issued April 21, 2006). They also noted small carriers are not included in SafeStat, yet may be at high risk of safety violations. Advocates also assert that the 2 x 10 criterion further reduces the pool of potential carriers subject to mandatory use of EOBRs.

A safety consultant stated CRs are an inadequate basis for identifying non-compliant carriers. Most carriers are not rated. Safety inspectors miss violations because of the volume of CRs they need to conduct. He also objected to the distinction between intentional and non-intentional errors in logs. He noted "DOT's own HOS study in 2004" suggested as many as 70 percent of long-haul carriers may have utilized false logs; his experience as auditor indicates that the figure may be accurate.

J.B. Hunt argued the methodology for selecting drivers in a CR does not reflect the overall compliance of the carrier. Rather, it indicates noncompliance among the particular drivers selected (from a population previously identified as having problems): It does not ensure that the least safe and compliant companies are required to install EOBR units. The NPRM states, "The overall safety posture of the motor carrier is not being measured during the CR." J.B. Hunt is concerned this means the desired safety impact of EOBR installations will not be maximized.

Maryland SHA asked that roadside inspection data be used to augment data obtained through a CR. If a carrier fails a CR, a second CR should not be needed before the remedial directive is imposed. Advocates supported this position. An individual supported using inspection data, suggesting FMCSA should set a threshold ratio for HOS violations found during inspections as the trigger. One individual recommended applying the requirement to carriers that are over 75 percent on SafeStat. J.B. Hunt recommended targeting at least carriers in categories A and B in SafeStat or some other reasonable measure that would impact a larger population.

OOIDA also stated until FMCSA completes its revision of SafeStat and issues a supporting document final rule, it will be nearly impossible for OOIDA to comment on the impact. OOIDA

believes the public should have another chance to comment on the trigger when the new scoring system is in place. In OOIDA's view, the Initial Regulatory Flexibility Analysis (IRFA) must also be revised at that time.

Response: Consistent with our NPRM, the Agency will use CR results to determine whether to issue remedial directives to carriers, requiring them to utilize EOBRs. The CR, typically conducted at the carrier's place of business, focuses on carrier management control as a metric for determining carrier safety fitness under 49 U.S.C. 31144. 72 FR 2373. As stated in part 385, noncompliance with critical regulations, which include all 24 HOS violations in the new Appendix C to part 385, "are quantitatively linked to inadequate safety management controls and usually higher than average accident rates. FMCSA has used noncompliance with acute regulations and patterns of noncompliance with critical regulations since 1989 to determine motor carriers' adherence to the Safety fitness standard in § 385.5" Part 385, App. B II(e). The rationale for using HOS violations under new Appendix C is consistent with the current safety fitness determination process and logically related to current part 385.

FMCSA believes the CR is the best assessment method to determine which carriers should be required to install EOBRs, since, rather than focusing on single violations, FMCSA is looking for threshold rates of noncompliance. The new definition of *threshold rate violation* at § 385.803, applicable to remedial directives, is entirely consistent with our current rules governing safety fitness determinations in part 385. The current regulations also require "more than one violation" for a "pattern of noncompliance," and, where a number of documents are reviewed, a finding of violations in 10 percent or more documents reviewed. Part 385 App. B II(g). Obtaining this large sampling of records can be best accomplished during a CR at the carrier's place of business. Such an overview of carrier management and operational safety oversight is not possible during a roadside inspection, as the review is confined to a single CMV and its driver (or team of drivers), at a single point in time. Indeed, CRs are designed to provide a sweeping assessment of carrier operations and safety management controls, and the assessments conducted, based on the Safety Fitness Rating Methodology (SFRM), form the basis for carrier safety ratings. Given the serious nature of the remedial directive and its potential to

place a financial burden on the carrier, we believe such a directive should be issued only after a broad operational examination and extensive record review inherent to the CR process. 72 FR 2373.

A number of commenters criticized the use of CR results as the trigger for a remedial directive. Many contended the use of the CR was inappropriate because the SafeStat algorithm used as part of the process of selecting carriers for CRs does not reliably predict high-risk carriers. These commenters believe other data, such as that received from roadside inspections, should be more fully utilized to determine which carriers receive CRs at the outset. In fact, SafeStat does incorporate motor carriers' roadside inspection outcomes, accident involvement, CR results, and enforcement history.

We cannot agree with J.B. Hunt's assertion that our basic methodology for selecting carriers for CRs is flawed. The SafeStat program continues to be upgraded to address issues raised by the GAO and the OIG. According to OIG, "FMCSA has made improvements in the data relied upon in SafeStat." (See letter from Calvin L. Scovel III, Inspector General, Department of Transportation, to the Honorable Thomas E. Petri, U.S. House of Representatives, June 19, 2007. <http://www.oig.dot.gov/item.jsp?id=2072>.) Moreover, a 2007 report from GAO, while suggesting improvements, nonetheless noted that SafeStat does a better job of identifying motor carriers that pose high crash risks than does a random selection. (See "Motor Carrier Safety: A Statistical Approach Will Better Identify Commercial Carriers That Pose High Crash Risks Than Does the Current Federal Approach, U.S. Government Accountability Office," June 2007, <http://www.gao.gov/new.items/d07585.pdf>.) FMCSA likewise disagrees with the Advocates' comment that SafeStat does not include small motor carriers. To the contrary, SafeStat does not exclude carriers based on size, and the system currently reflects data on even 1- and 2-truck operators.

As noted in our NPRM, we considered and rejected using only roadside inspection data for the remedial directives trigger because roadside inspections fail to measure carrier operations as comprehensively as CRs. Nevertheless, we acknowledge that far more roadside inspections are conducted compared to CRs, and they are a key and voluminous source of HOS compliance data. We will continue to use this valuable roadside data indirectly in the remedial directives selection process to inform SafeStat

selection rankings (72 FR at 2373 n. 5). Some commenters urged the Agency to use the Driver Safety Evaluation Area (SEA) component of SafeStat, which is based on roadside data, for a remedial directives trigger. The Driver SEA, however, combines both HOS and non-HOS violations, rendering its current use infeasible for a remedial directives trigger based exclusively on HOS violations. The Agency is actively exploring additional ways to tap into the enormous wealth of roadside data through its Comprehensive Safety Analysis (CSA) 2010 initiative.² In summary, CR findings will be the only direct basis to trigger a remedial directive under today's final rule. However, the follow-on rulemaking, discussed earlier, will explore this and other methodologies for determining whether a motor carrier would be required to install and use EOBRs.

3.3 Implementation of Remedial Directives

Maryland State Police commented the remedial directives concept will work only if there are follow-up actions for failure to comply with a directive. Report on Board stated the remedial directive would have no impact on problem drivers because police would not know which carriers are required to use an EOBR.

Others described the challenges of measuring impacts. For instance, Boyle Transportation contended, any benefits gained could not be extrapolated to the population at large because only bad carriers would be included. Public Citizen declared the number of carriers affected by the EOBR requirement is too small a sample to make statistically significant statements about the effectiveness of the number of devices installed. Maryland SHA stated imposing the requirement should affect the carrier's safety fitness determination. They noted carriers' ratings are affected by crashes for which they are not at fault.

J.B. Hunt, AMSA, and two individuals supported the two-year period for which a remedial directive would be required. These commenters generally did not provide detailed rationales for their support; however, generally, they deemed the two-year period adequate to

enable carriers to come into compliance. AMSA also added that this period would allow for carriers to adopt management controls and corrective action. Advocates opposed the two-year period, since once the period expired carriers could remove the devices; consequently, carriers will view EOBR not as an asset, but as a punishment.

Maryland SHA and Advocates stated the 60-day period (with a possible 60-day extension) to require EOBR installation once a remedial directive has been issued is too long. Carriers could continue unsafe practices during this period. Werner and an individual commenter thought the 60-day period was too short. Werner stated for all but the smallest carriers, the 60-day period would be used to locate a vendor, negotiate contracts, obtain delivery, route all trucks to the terminal for installation, and train the drivers. Some of these factors are beyond the carrier's control. Flexibility is needed to give more than 60 days if the carrier is making a good faith effort to comply.

Response: In response to the Maryland State Police's assertion that follow-up action is needed to enforce remedial directives, proof of compliance will be required (e.g., receipts), and FMCSA will disseminate information to enforcement personnel nationwide identifying which carriers are required to use EOBRs. Carriers who do not comply with a remedial directive will be ordered out of service. We believe the prospect of such an order will ensure compliance for carriers subject to a remedial directive.

We appreciate that issuance of a remedial directive requiring installation of EOBRs for an entire fleet of CMVs within 60 days may place a serious burden on certain carriers. Consequently, we appreciate Werner's concern that some factors, such as picking a vendor, are sometimes beyond a carrier's control, and, therefore, flexibility is needed where a carrier is making a good faith effort to comply. We note that, as proposed, today's rule allows FMCSA to extend the period during which carriers subject to a remedial directive may operate without EOBRs for up to an additional 60 days where the Agency determines a carrier is making a good faith effort to comply with a remedial directive. As a result, while the Agency expects compliance within 60 days, some carriers may have up to 120 days, at the Agency's discretion. Passenger and hazmat carriers, however, are limited to a single, non-extendable 45-day period.

We disagree with ATA's suggestion to provide a warning opportunity to allow for compliance improvements prior to

issuing a remedial directive. Such improvements, in practice, are difficult to assess. For instance, would simply hiring a new safety officer be sufficient? Or would merely hiring a consultant for a short time period to conduct a "quick fix" assessment of the situation be adequate? And how quickly would improvement need to be initiated and implemented, and for how long would it need to be sustained? These questions illustrate some of the challenges to the Agency of verifying if such mitigation measures are adopted and, if so, measuring their effectiveness at addressing the underlying safety concerns. Discovery of HOS threshold rate violations indicates a carrier has serious management control issues which need to be addressed promptly and decisively. If the Agency has made an erroneous finding, that finding can be challenged under the administrative review process proposed in the NPRM and finalized today.

Because the 1 x 10 approach requires the finding of an HOS Appendix C threshold rate violation in only a single CR, the proposed notice of potential remedial directive applicability (NPRDA) is no longer necessary and thus is not included in this final rule. The administrative review procedures apply only upon issuance of a remedial directive. Otherwise, the administrative review process proposed in the NPRM is adopted without change in today's final rule.

If a motor carrier believes the Agency committed an error in issuing a notice of remedial directive and proposed unfitness determination, the carrier may request administrative review under § 385.817. Challenges to the notice of remedial directive and proposed unfitness determination should be brought within 15 days of the date of the notice of remedial directive. This timeframe will allow FMCSA to issue a written decision before the prohibitions in § 385.819 go into effect. The filing of a request for administrative review under § 385.817 within 15 days of the notice of remedial directive will stay the finality of the proposed unfitness determination until the Agency rules on the request. Failure to petition the Agency within the 15-day period may prevent FMCSA from ruling on the request before the prohibitions go into effect. The carrier may still file a request for administrative review within 90 days of the date of issuance of the notice of remedial directive and proposed unfitness determination, although if such request is not filed within the first 15 days, the Agency may not necessarily issue a final determination before the prohibitions go into effect. Challenges to

² The goal of CSA 2010 is to develop and implement more effective and efficient ways for FMCSA, its State partners and industry to reduce commercial motor vehicle crashes, fatalities, and injuries. CSA 2010 will help FMCSA and its State partners contact more carriers and drivers, use improved data to better identify high risk carriers and drivers and apply a wider range of interventions to correct high risk behavior. See <http://www.fmcsa.dot.gov/safety-security/csa2010/home.htm>.

issuance of the remedial directive and proposed unfitness determination are limited to findings of error relating to the CR immediately preceding the notice of remedial directive.

The final rule does not affect current procedures under § 385.15 for administrative review of proposed and final safety ratings issued in accordance with § 385.11. The Agency is adopting non-substantive revisions to § 385.15(a), however, solely to correct two typographical errors.

A motor carrier subject to a remedial directive will not be permitted to request a change to the remedial directive or proposed determination of unfitness based upon corrective actions. In contrast to § 385.17, under which the Agency considers corrective actions taken in reviewing a carrier's request for a safety rating change, the only "corrective action" the Agency will take into account in conditionally rescinding a proposed unfitness determination under subpart J will be the carrier's installation of § 395.16-compliant EOBRs and satisfaction of the other conditions of the remedial directive. The Agency takes this position due to the severity of the violations upon which the remedial directive is based, the need for certainty in remediation of the motor carrier's proven safety management deficiencies, the challenges of ongoing monitoring of corrective action, the likely added deterrent effect, and the Agency's desire to promote use of EOBRs in the motor carrier industry generally.

The Agency may, nevertheless, consider a carrier's installation and use of EOBRs as relevant information that could, under certain circumstances, contribute to an improvement of a carrier's safety rating under § 385.17(d). An upgraded safety rating based upon corrective action under § 385.17 will have no effect, however, on an otherwise applicable remedial directive or proposed unfitness determination. As noted above, a carrier may be found unfit based on either failing to meet the safety rating component of the safety fitness standard under §§ 385.5(a) and 385.9, or under § 385.5(b), by failing to install, use or maintain an EOBR, when subject to a remedial directive under § 385.807.

Appeal rights and administrative review, and the relationship between the modified fitness determination rule in § 385.5 and the existing SFRM in Appendix B to part 385, were discussed at length in the NPRM. See 72 FR 2376–2378. Except for the elimination of the notice of potential remedial directive applicability, caused by the shift from a 2 x 10 to 1 x 10 trigger, the

administrative review procedures in the final rule are unchanged from those in the proposed rule. The relationship between the safety fitness determination and the SFRM likewise is not modified by any changes made between the proposed and final rules.

The Agency adds a new paragraph (e) to § 385.13 to clarify that motor carriers receiving a final determination of unfit or a final unsatisfactory safety rating will receive notice that their motor carrier registration under 49 U.S.C. 13902 is being revoked.

4 Transition From an AOBRD to EOBR System

Several commenters, including a motor carrier and two system providers, addressed potential challenges for motor carriers currently using AOBRDs and other automated HOS monitoring systems. They were concerned with how the compliance dates would affect their use of current AOBRD systems and expressed concern that the proposed EOBR regulation would prevent transferring proprietary systems to new trucks manufactured after the proposed compliance date.

Commenters predicted the period of transitioning could adversely affect fleets' adoption of the new devices. For this reason, a provider suggested the phase-in period should be fleet-based rather than vehicle-based, and that "breaks" should be offered to early adopters of EOBRs.

Response: It is not the Agency's intention to make AOBRDs obsolete or to require compliant motor carriers to replace their current systems of maintaining RODS. Only motor carriers that are subject to a remedial directive will be required to install, use, and maintain EOBRs—and those EOBRs will need to comply with the new performance requirements. Any carrier that voluntarily installs an EOBR after the compliance date must use a device that meets FMCSA's new requirements. Therefore, the Agency does not consider it appropriate or practical to institute a "fleet based" compliance schedule for motor carriers that currently use AOBRDs and are not subject to a remedial directive. The Agency does not wish to penalize HOS-compliant motor carriers by setting an arbitrary phase-out date for AOBRDs.

FMCSA is aware of many current systems with capabilities and features that exceed those required for AOBRDs and likely meet most if not all of the new EOBR requirements. Additionally, AOBRDs and EOBRs record the same key information and use the same duty status codes, so FMCSA does not believe drivers or motor carriers will

require a long transition period. In any event, FMCSA will monitor developments related to EOBR system availability associated with the implementation of this rule.

5 Privacy

Numerous commenters expressed concerns about non-HOS uses of the data being collected by EOBRs. Some commenters suggested the rule have more restrictions on access to and use of the data. Some of these commenters (primarily carriers or carrier associations) said the rule should prohibit law enforcement from using the data for any purposes other than enforcing HOS rules, such as issuing speeding tickets. They also said agencies not involved in enforcing HOS should be denied access to EOBR data unless they obtain the consent of the carrier or driver. Werner Enterprises said the rule should clarify how long law enforcement agencies may retain EOBR data and whether the agencies may disclose the data to other parties. ATA, the Canadian Trucking Alliance, and AMSA suggested carriers are unlikely to voluntarily adopt EOBRs unless there are restrictions on the use of data for purposes other than enforcing HOS rules. ATA recommended statutory protections be provided to carriers pertaining to the control, ownership, and admissibility/discoverability of data generated and derived from EOBRs, and to assure the privacy rights of drivers.

Some commenters expressed concern competitors would gain access to data recorded by EOBRs. One of them was also concerned shippers or receivers would start demanding real-time monitoring of shipments as part of any contract. Another commenter was concerned employers would use the data recorded by EOBRs to push drivers to drive when it may not be safe to do so.

Some parties raised the concern that data recorded by an EOBR could be used in post-accident litigation. One commenter favored using EOBR data to investigate accidents involving tractor-trailers, including vehicle speed, braking, and steering for the last 30–60 seconds of vehicle travel. The Maryland SHA said only the following entities should have access to EOBR data for investigating tractor-trailers accidents: The Secretary of the U.S. Department of Transportation, FMCSA, the enforcement agency that investigates the crash, the carrier, and the driver or the driver's personal representative.

Several commenters contended EOBRs would violate the privacy of drivers. Some of these commenters said

the proposed EOBR requirement would be unconstitutional in that use of EOBRs would violate the Fourth Amendment's prohibition against searches absent a warrant or probable cause. Company drivers employed by carriers with high HOS violation rates would find themselves subject to EOBR monitoring because of the actions of others, which would not satisfy a requirement of probable cause.

OOIDA provided extensive comments asserting that required use of EOBRs would constitute an unconstitutional invasion of privacy as drivers have a legitimate expectation of privacy when they sleep, eat, and conduct personal business in their truck while not driving. OOIDA said despite FMCSA's assurances to the contrary, EOBRs would capture, store, and make available a variety of personal and proprietary information on drivers and carriers (e.g., routes, customer locations, etc.) not captured or not accessible through paper logs. The proposed rule would require EOBRs to capture the location and time of a truck in motion every minute. This information would be electronically transferable and capable of being stored for later retrieval. Because a driver can operate a truck for personal conveyance, the EOBR would record where the driver spends his private time. OOIDA asserted the contemplated use of EOBRs fails to meet the legal requirements for a warrantless search. Such constant electronic surveillance would amount to a search of the driver as defined by the Fourth Amendment. Therefore, the use of EOBRs implicates core privacy interests, including the right to privacy in personal information and in associations. OOIDA further asserted it is impossible to understand the full impact of the proposed EOBR rule on privacy without knowing more about the pending rulemaking on HOS supporting documents.

OOIDA said the data captured by EOBRs is at far greater risk for dissemination and misuse than data recorded by log books. It said any data created by an EOBR that are collected by the government for investigation or enforcement or any other reason would be subject to requests under the Freedom of Information Act (FOIA) and could be available by request to anyone, including the general public. OOIDA said the U.S. Department of Transportation's Research and Innovative Technology Administration (RITA) Volpe Center's report ("Recommendations Regarding the Use of Electronic On-Board Recorders (EOBRs) for Reporting Hours of Service," September 26, 2005, available

at <http://www.regulations.gov>, ID FMC SA-2004-18940-0351) agreed with this conclusion. A commenter said because data collected by Federal agencies are subject to FOIA, carriers should not have to report GPS location data. ATA asked FMCSA to work with the trucking industry to seek enactment of Federal statutory protections of EOBR data. ATA said Federal law should support and clarify that motor carriers are the owners of the data recorded by EOBRs and thus they should have exclusive control over the data.

Response: This final rule does not change the Agency's treatment of HOS records concerning access, use and retention. FMCSA's predecessor agencies have had the authority to review drivers' and motor carriers' documents since 1937, when the first HOS regulations were promulgated (3 MCC 665, Dec. 29, 1937; 3 FR 7, Jan. 4, 1938). From the Motor Carrier Act of 1935 onward, Congress has recognized the Federal Government's interest in providing a higher level of safety oversight to CMV drivers. CMV driver licensing, driver's physical qualifications, training, and performance of driving and other safety sensitive duties are subject to Federal regulation. The Federal Government also requires records to document the results of various types of assessments (such as assessment of physical qualifications and controlled substances and alcohol testing) and compliance with regulations concerning CMV operations (such as RODS to document HOS).

The HOS information recorded on EOBRs will be examined by Federal and State enforcement personnel when they conduct compliance reviews or roadside inspections. Motor carriers will not be required to upload this HOS information into Federal or State information system accessible to the public. Furthermore, enforcement agencies will request and retain copies of HOS information to document violations and will not disclose private personal or proprietary information.

The final rule maintains current uses of HOS data to determine compliance with the HOS regulations. While we recognize the important privacy concerns raised by carriers and drivers, we believe this final rule carefully fulfills the Agency's need for accurate compliance data without creating any undue intrusion upon a CMV driver's privacy. The only information FMCSA is requiring EOBRs to collect is that information necessary to determine driver and motor carrier compliance with the HOS regulations. Consequently, FMCSA did not propose

in the NPRM, nor will it require in the final rule, that EOBRs record data on vehicle speed, braking action, steering function, or other vehicle performance parameters necessary for accident reconstruction. Regarding the concern over potential use of EOBR data in post-crash litigation, this rule does not affect the rights of private litigants to seek discovery. Similarly, existing provisions governing FMCSA disclosure of motor carrier and driver information under FOIA are not affected by this rulemaking.

The Agency understands some drivers view their off-duty time and related information pertaining to their CMV's location as being sensitive information. Although the Agency does not find a legitimate expectation of privacy in the public location of a commercial motor vehicle, it will require automatic recording of CMV location information only to the level of precision (State, county, and Populated Place) shown in the Geographic Names Information System (GNIS) maintained by the United States Geological Survey. FMCSA is also declining to require locational tracking more frequently than once every 60 minutes while the truck is in motion. The main reason enforcement personnel would need to determine a history of a CMV's location would be to verify the driver's HOS compliance. This can normally be accomplished by reference to the name of the nearest city, town, or village, without the precise geographic coordinates necessary to identify, for example, a particular restaurant where a driver stopped for a meal. This is the requirement today with AOBRDs, and it also will be required under new § 395.16(f)(4). Except in the context of an investigation of a crash or a complaint of alleged FMCSR violations (when the Agency might inquire into off-duty time to learn if a driver was working for another motor carrier or performing other work during an alleged off-duty period), FMCSA generally does not inquire into a driver's off-duty activities. The Agency's interest in records of duty status that identify the date, time, and location at each change of duty status is based on its need to reconstruct the sequence of events for trips to determine compliance with the HOS regulations, including whether the driver was provided an off-duty period that could be used to obtain restorative sleep. If during this enforcement process FMCSA found evidence of vehicle activity during a claimed off-duty period, we would inquire further to establish the veracity of the RODS.

Briefly described are new provisions previously proposed in the January 2007

NPRM regarding default status for EOBRs and audit trails. FMCSA will require the “default” status for an EOBR be on-duty not driving (ODND) when the vehicle is stationary (not moving and the engine is off) for 5 minutes or more. When the CMV is stationary and the driver is in a duty status other than the ODND default setting, the driver would need to enter the duty status manually on the EOBR. The

performance requirements of § 395.16 add a provision for automatically recording the location of the CMV. The Agency believes this requirement strikes an appropriate balance between improving the accuracy and reliability of ODND status information and off-duty information without intruding unnecessarily upon the privacy of the driver. Drivers would still be required to record the location of each change of duty status, as currently required under §§ 395.8 and 395.15. Finally, as stated in the NPRM (72 FR 2352), the Agency recognizes the need for a verifiable EOBR audit trail—a detailed set of records to verify time and physical location data for a particular CMV—must be counterbalanced by privacy considerations. *See also* the discussion on FMCSA’s Privacy Impact Assessment under preamble section V. Rulemaking Analyses and Notices.

We disagree with two assertions made by OOIDA based on the premise that “any EOBR data collected by the Federal Government is subject to FOIA and may be available to any entity or the general public.” OOIDA’s statement is an overly simplistic interpretation of our responsibilities under FOIA and DOT regulations. *See* 49 CFR part 7. The Volpe Center statement relied upon by OOIDA is not the official legal opinion of FMCSA. The Agency rejects OOIDA’s interpretation based on the two scenarios raised.

First, FMCSA rejects the OOIDA argument that EOBRs will allow a competitor to obtain access to information that would be deemed proprietary, such as carrier routes. If the information was indeed proprietary, the information would be exempt from FOIA disclosure under 5 U.S.C. 552(b)(4). Given that the Agency is only requiring EOBRs to collect locational data at each change of duty status and at intervals of no greater than 60 minutes while the CMV is in motion, and given that the locational data need only identify the nearest city, town, or village, the information gathered is not likely to be precise enough to allow routes or customers to be determined. It is also likely that competitors could, to some extent, discern motor carriers’ routes by other means. No commenter

has provided information demonstrating competitive harm—a showing mandated by FOIA—would occur from disclosure of EOBR data as proposed in the NPRM. In the absence of such a showing, the Agency has determined today’s final rule, in conjunction with existing legal authorities, properly balances the need to safeguard proprietary information against the need to enforce safety statutes and regulations.

Second, OOIDA alleges that FOIA could be used to obtain personal information, including truck location. As a preliminary matter, the Agency does not agree that the location of a CMV in a public place qualifies as “personal information.” Moreover, with respect to genuinely personal identifying information, FOIA’s exception for personnel, medical and similar information at 5 U.S.C. 552(b)(6) severely restricts the Agency from disclosing such information. In response to past FOIA requests for driver RODS from a carrier, the Agency has redacted all information that would reveal the identity of an individual driver. The Agency need not, and will not, disclose the name of a driver when the sec. 552(b)(6) exemption allows the Agency to disclose the HOS records in a redacted form. The Agency has also denied FOIA requests seeking individual driving records in the Agency’s possession. OOIDA’s characterization does not accurately reflect applicable judicial standards for the disclosure or withholding of private personal information.

We also disagree with OOIDA’s claim that required use of EOBRs amounts to an illegal search under the Fourth Amendment. It is well-established that the collection and inspection of documents and information pursuant to regulatory guidelines do not violate the Fourth Amendment. The data that compliant EOBRs will gather are comparable in most respects to the data already required on RODS. Further, there is no reasonable expectation of privacy in the location of a CMV, which can be monitored by the naked eye. The installation and use of the EOBR will also be known to the driver, and thus any expectation of privacy that might exist in the location of the CMV is significantly diminished.

6 Performance-Oriented Standards for EOBR Technology

6.1 Use of Detailed Design Specifications

A number of commenters disagreed with FMCSA’s approach of using performance oriented standards in the NPRM, and advocated using detailed

design specifications instead. Three asked for prescriptive guidance on how EOBRs must record HOS for drivers who work for multiple carriers or who drive multiple CMVs. CMV manufacturer ITEC stressed the need for interoperability between EOBRs and the equipment used by law enforcement officials, including both hardware connections and software compatibility. Siemens criticized the proposed performance-based approach, advocating instead a “single technical solution” to account for HOS for drivers who operate more than one CMV during any given day. Siemens believes, based upon its experience with international requirements for HOS monitoring, that an EOBR system’s technical concept should be “tailored for the specific needs and goals of the region in which they are being considered.”

Several other commenters, including XATA, SC&RA, and ATA expressed concerns with FMCSA’s approach. They seek specific, uniform, and consistent EOBR requirements related to EOBR utility, reliability, tamper-resistance, accuracy, durability, and effectiveness. Because electronic equipment technologies and industry consensus standards and recommended practices evolve over time, they questioned whether FMCSA’s regulation would provide sufficiently clear direction to suppliers and users of EOBR systems. ATA asserted motor carriers would not adopt EOBRs until their “compliance” was assured. Until that point, ATA believed motor carriers would not be able to accurately assess potential benefits and costs of EOBRs, and the potential for improving EOBR technology would be constrained. ATA recommended FMCSA publish an SNRPM to revise its proposed performance specifications.

Siemens and PeopleNet expressed concern about a need for design specifications to promote implementation of EOBR data integrity requirements. Siemens focused on EOBR data integrity through operational and legal chains of custody. Although it did not elaborate on its reasoning, Siemens contended neither AOBRDs nor the proposed EOBRs would protect data from falsification and called on FMCSA to standardize file formats, download protocols, and user interfaces. Siemens also recommended FMCSA reference a “defined” [published] security standard such as the *Common Criteria* to define the level of tamper resistance.

Response: As the commenters point out, information technology standards evolve over time; performance standards allow EOBR suppliers to implement

solutions that will improve users' ability to enter, review, and use data efficiently and effectively without constraining innovation or improvements.

Responding to comments concerning prescriptive requirements to ensure data integrity during transfers, Appendix A to part 395 addresses requirements for hardware, software, and communications related to transfer of data from an EOBR to a safety official's portable computer. As will be discussed later in this section, FMCSA has substantially revised these requirements in response to the comments on the NPRM.

Responding to Siemens' comments about the necessity for a "single technical solution" for all EOBR applications, FMCSA disagrees. A full set of design specifications for hardware, software, and communications methods would impose unnecessary restrictions on the design of EOBRs and support systems, limit the ability to adopt emerging technologies, and constrain motor carriers with different operational characteristics from implementing EOBR applications. However, the data element dictionary will serve as a guide to developers of EOBR and support systems to foster the use of compatible data structures for the benefit of both motor carriers and safety oversight agencies.

Responding to comments concerning cross-referencing European Union (EU) standards, FMCSA notes that the EU Council regulation No. 2135/98 requires a "driver card" for recording and transferring HOS data. It does not include provisions for wireless data transfer. In contrast, many North American suppliers of AOBRD systems currently provide wireless data transfer capabilities between a CMV and the motor carrier's information management systems via satellite or cellular transmission. FMCSA does not agree that data transfer methods requiring the use of physically removable media should be mandated, because wireless data transfer (1) provides motor carriers considerably more flexibility to implement HOS and other motor carrier operational oversight systems, and (2) does not have an adverse effect on the quality and integrity of the HOS data.

With respect to data integrity, although FMCSA is not requiring specific information technology structures, the Agency expects motor carriers and their EOBR system providers to use appropriate methods and procedures in the development, testing, and operation of HOS information systems to ensure data and information integrity. However, after

reviewing the "Common Criteria" cited by Siemens, "Common Criteria for Information Technology Security Evaluation," the Agency understands that these requirements were developed primarily for use with national security and defense communities and would go far beyond what is necessary for monitoring HOS compliance.

6.2 Information and Display Requirements

6.2.1 Information Content Requirements

Several commenters objected to the proposed requirement for EOBRs to record information currently required by the HOS regulations, including shipping information, motor carrier name and USDOT Number, and a time and location entry at each change of duty status. One supplier contended an EOBR would need a "full keyboard" to enter this information. Seven commenters objected to the proposed requirement to include State line crossing information, questioning its relevance to HOS compliance assurance.

Werner asked for clarification of the "24-hour start time," because it believes the 24-hour period of the underlying HOS regulation is affected by the "split break" and would vary. Although it noted the ATA Technology and Maintenance Council's (TMC) Technical Policy Advisory (TPA) (collectively, TMC TPA) recommended the use of the four codes (*i.e.*, OFF, SB, D, and ON), Werner asked for flexibility to allow use of other duty status codes. Conversely, Siemens held the four codes should be unique to avoid inconsistencies. ITEC asked if there was a potential inconsistency between the diagnostic event codes and the code words in Table 3, EOBR Diagnostic Event Codes.

ITEC and a motor carrier asked for flexibility in coding of latitude and longitude values to allow software users to operate outside of North America. Werner stated its system calculates the name of the nearest city or town from latitude/longitude coordinates.

Response: As noted earlier, this rulemaking updates and revises the requirements for use of technological methods to record HOS. It does not change the underlying HOS regulations. With the exception of the requirement to record CMV location hourly while the CMV is in motion, it does not change the basic requirements for documenting HOS-related information (such as motor carrier identification).

FMCSA disagrees that an EOBR would need a "full"—presumably a full-sized—keyboard. Some of the earliest AOBRDs did not have full keyboards,

leading to the requirement in § 395.15(d)(2) for a listing of location codes. Many contemporary devices have full keyboards (although the dimensions are considerably smaller than those used with desktop computers). Others use partial keypads or touch-sensitive screens. Information such as the carrier name, USDOT Number, and shipping document references can also be entered automatically through centralized or administrative applications. These entries continue to be necessary to identify the motor carrier, CMV, and other information related to the transportation. EOBRs must accommodate recordkeeping for drivers who operate multiple CMVs, as AOBRDs are required to do.

FMCSA agrees that display of State line crossing information is not necessary for HOS compliance assurance purposes and has removed the requirement from the rule. Collection of State line crossing information for fuel tax reporting purposes will continue to be optional, as in the current AOBRD rule.

Responding to Werner's question about the start time for a 24-hour period, this regulation has not changed. Both §§ 395.8(d) and 395.15(c)(10) of the current rules allow the motor carrier to select the 24-hour period starting time.

Responding to comments on duty status coding, the identifiers will remain "driving" or "D," "on-duty, not driving" or "ON," "off-duty" or "OFF," and "sleeper berth" or "SB." This maintains consistency with current regulation and for the transition from AOBRDs to EOBRs. Also, a driver could enter explanations concerning duty status activities (such as a period of ON time spent loading a trailer or performing maintenance on a power unit) in the Remarks section.

In response to ITEC's question about event codes, the labels for the event codes are 6 characters, but the codes themselves would be 2 characters (bytes) in length.

In response to the questions about latitude and longitude codes, the proposed rule was written with North American users in mind. FMCSA recognizes some CMVs may travel outside North America, and other nations might want to adapt the FMCSR requirement. In the interests of international harmonization, the final rule makes a nominal revision to the data dictionary to accommodate a field for east/west latitude ("E/W") and north/south longitude ("N/S"). EOBR and system suppliers may set these fields to default to "N" and "E" entries.

As to the use of an algorithm to identify the nearest city, town, or

village, Question 3 of the Regulatory Guidance to § 395.15 allows this. FMCSA intends to allow EOBR systems to use this method as well. The Regulatory Guidance is added as § 395.16 (f)(4). However, the Agency has not accepted and will not accept *only* latitude-longitude codes as location records because they do not provide a safety official with a way to quickly determine a geographic location on a standard map or road atlas. (See §§ 395.15(d) and 395.16(f)(2).) Although the provision for location codes in § 395.16(f)(5) is specific to the United States, EOBR and system suppliers may augment their location-tracking capabilities to include locations outside the United States.

6.2.2 Driver Acknowledgement of HOS Limits Alerts § 395.16(o)(4))

Qualcomm and the TMC TPA oppose the proposal to require a driver to acknowledge warnings of HOS limits. The TMC TPA recommends the EOBR include configurable alert capabilities so a driver could receive several alerts before reaching the regulatory limits of HOS. Qualcomm stated it was unclear what would be required if the driver failed to acknowledge warnings. Werner was concerned about a conflict between the reporting time for position histories and the ability to record a 30-minute warning. In contrast, Maryland SHA stated the warning should be recorded in the EOBR and made part of the driver's record.

Response: The proposed “response” provision would have required the driver to interact with the EOBR while the CMV is in motion, and it is not part of the final rule. FMCSA does not believe it is appropriate to require the driver to interact with the EOBR while the vehicle is in motion. However, the requirement for the minimum, 30-minute alert remains in the final rule.

6.3 Duty Status Category When Vehicle Is Not Moving (§ 395.16(d))

6.3.1 EOBR Must Default to On-Duty/Not-Driving When Vehicle Is Stationary for 15 Minutes or More

Werner and the Maryland State Police agreed with the proposed 15-minute default to on-duty/not-driving (ODND). In contrast, Qualcomm and Siemens asserted the 15-minute period was too long and that the determination of driving/non-driving time should be more flexible and should also reflect motor carriers' operational practices in recording driving time. Siemens recommended switching to ODND whenever a CMV stops, contending that the interpretation of stops should be

part of the compliance software, rather than the data record.

Commenters suggested two distance thresholds for an EOBR to record a CMV in motion as “D.” Werner suggested a 2-mile threshold, while Qualcomm and the TMC TPA recommended a 1-mile threshold. For changing a default status from D to ODND, Werner recommended if a vehicle moves less than 1 mile, a 5-minute stop would reset the movement threshold. The “driving stop” situation should alert the driver of duty status change and allow the driver to override the default. For example, the duty status would remain D if the CMV were stopped in traffic or when the driver operated auxiliary vehicle functions while seated at the driving controls.

Response: FMCSA agrees that a 15-minute period is too long. Section 395.16(d) has been revised to require that an EOBR automatically record driving time, and the EOBR's entry must change to on-duty not driving when the CMV is stationary for 5 minutes or more. The driver must then enter the proper duty status. If the CMV is being used as a personal conveyance, the driver must affirmatively enter an annotation before the CMV begins to move.

FMCSA agrees with the TMC TPA's interpretation concerning the entry of the time of a duty status change: it must be done when the change takes place.

6.3.2 Recording and Confirmation of On-Duty Not Driving and Driving Status

Several commenters, including Werner, Qualcomm, ATA, the MTA, and the authors of the TMC TPA asked FMCSA to clarify how to record duty status information when the CMV is in motion, but the driver is not in a “driving” status. These situations include a maintenance technician repositioning a CMV in a motor carrier's yard and a driver using a CMV as a personal conveyance. Commenters also cited the draft TMC TPA's treatment of situations where a driver fails to log on to the EOBR, prompting the driver and continuing to record driving time if the driver ignores the prompt, and allowing a driver to confirm previous driving time, and generating a system error if a driver ignores prompts.

Response: As is the case with AOBRDs, the driver would need to select and enter the proper duty status and make the appropriate entry in the “Remarks” section of the record. This rule does not change the way FMCSA defines ODND activities. In response to the questions concerning use of a CMV as a personal conveyance, FMCSA has revised §§ 395.16(d)(1) and 395.16(h)(3). If a CMV is being used as a personal

conveyance, the driver must affirmatively enter an annotation before the CMV begins to move.

6.3.3 Other Comments on Duty Status Defaults

IBT, OOIDA, TCA and 23 other commenters stated that the need for manual entry of non-driving status creates the same potential for violations of the HOS rules as the present system. For many drivers, ODND time may account for a substantial proportion of their work schedules. Because drivers may receive less pay for hours ODND than for driving time—or no pay at all—they have an economic incentive to under-report the number of those hours. OOIDA contends if drivers were compensated for this time most deficiencies in drivers' recording their ODND time would disappear.

Response: FMCSA is not aware of any devices currently available that would enable automatic recording of all categories of duty status, nor did any commenters suggest that such devices are available. Given concerns about personal privacy in general, we do not believe proposing the use of personal activity monitors for HOS compliance purposes would be appropriate. Despite the need to require the driver to manually enter some kinds of information, FMCSA believes the automatic recording of CMV location information will assist the Agency in investigating potential violations of part 395.

As to drivers' compensation for ODND time, driver compensation is not within FMCSA's jurisdiction.

6.4 Malfunction Alert System

Several commenters opposed the proposed requirement for an EOBR to provide an audible and visual signal when it ceases to function properly (§ 395.16(o)(6)). KonaWare, Qualcomm, TMC, Werner, and FedEx believe the requirement for a failure-alert system would add to the costs of an EOBR. Qualcomm expressed concern that driver alerts for minor interruptions in device operation, such as loss of mobile communications network coverage for very short periods of time should not be required while the CMV is being driven. Instead, Qualcomm believes they should be indicated only when the vehicle is stopped or if they affect required data capture, requiring the driver to enter remarks or amend a record.

The TMC TPA and Qualcomm recommended FMCSA allow the driver to fill in missing data for non-critical sensor failure. The data would be “annotated” as driver-added information, and a record of the sensor

failure would be included in the log data. ATA said more specificity was needed on driver reporting, carrier correction, and sensor failures.

Response: FMCSA continues to believe it is necessary to require the malfunction alert system required for EOBRs in § 395.16 remain essentially the same as that currently required for AOBRDs in § 395.15(i)(4). FMCSA agrees with the commenters that certain types of brief interruptions in operation should not be considered an “EOBR device failure.” In particular, the Agency acknowledges location information can be momentarily lost due to signal blockages, such as from bridges or geographic features. The Agency revises § 395.16(o) to clarify subsystem and sensor failure alert.

6.5 Synchronization of EOBR to Vehicle (§ 395.16(e) and (g))

Most commenters strongly disagreed with the proposal to allow EOBRs without integral synchronization with the vehicle. Vendor commenters XATA, Qualcomm, Tripmaster, Siemens, and PeopleNet, motor carriers Boyle Transportation, Fil-Mor Express, and J.B. Hunt, safety advocacy groups IIHS and Advocates, and CVSA and TMC provided extensive comments opposing the Agency’s proposal to allow the use of EOBRs that are not synchronized with the CMV. Various commenters addressed both the need for integral synchronization and the inability of GPS technologies to provide driving time and CMV travel-distance information with sufficient accuracy.

XATA commented that a duty status other than D is difficult to automate, so the D status must be as accurate as possible. A connection to the engine makes it possible to automatically enter the vehicle identification, so only the driver’s identification must be entered manually. XATA suggested entering both items of identification manually increases opportunities for falsification and difficulty of auditing.

Tripmaster was concerned non-synchronized EOBRs could not be designed to prevent tampering and manipulation. Tripmaster recommended synchronization include obtaining power from the vehicle, obtaining distance from vehicle-based sensors or networks, and ensuring the device could not be deactivated without visible signs of tampering. Tripmaster also believed FMCSA could generate more realistic performance standards for synchronized than for non-synchronized EOBRs. Tripmaster and the TMC TPA noted the inherent inaccuracies of GPS-based distance measurement (citing a University of Oregon study that found

GPS-based distance accuracy to range from 75 percent to 94 percent of actual distance traveled). Tripmaster added that non-synchronized devices could provide location data from the driver carrying the device on his/her person, well beyond what is required to verify the accuracy of the RODS and that auditing the electronic RODS records for non-synchronized EOBRs would be problematic, particularly if there would be no supporting documents to verify driving time.

IIHS and Advocates stated FMCSA failed to provide evidence the non-synchronized EOBRs can provide secure and accurate records, be made tamper-resistant, or ensure records will be related to a unique truck, driver, and carrier. Advocates was particularly concerned FMCSA’s proposed approach would eliminate the Agency’s ability to assess the design and operational integrity of EOBRs.

With respect to use of GPS technologies substituting for integral synchronization, Qualcomm, ITEC, and other commenters cited problems associated with losing the GPS signal. GPS technology suffers from “canyon effect” in urban areas, where tall buildings and tunnels can block the communications pathways to the GPS satellites, and even relying on GPS signals for distance traveled on a minute-by-minute basis may not achieve the accuracy FMCSA desired in the NPRM. Furthermore, the straight line point-to-point distances computed between recording intervals is less than actual travel distances over curved segments of highway. For this reason, Boyle Transportation favored a requirement for EOBRs to have GPS capability and to be synchronized to the engine, to improve both tamper-resistance and the ability to calibrate the device.

A number of commenters stated non-synchronized systems would be vulnerable to tampering and manipulation. Tripmaster, J.B. Hunt, and PeopleNet noted non-tethered devices can be turned on and off or removed from the vehicle and left behind, leading to falsification of travel distance and duty status information. J.B. Hunt, Tripmaster, PeopleNet and the TMC TPA noted physically blocking a GPS receiver’s antenna (such as by covering it with aluminum foil) was completely effective in blocking the signal, and the signal could be corrupted by a noisy radio frequency (RF) transmitter. Siemens added that unsynchronized EOBRs would be useless for enforcement if used by drivers willing to cheat because their data integrity would be no better than

with manual RODS. Additionally, safety officials would not have an enhanced tool to detect falsification; and, if EOBRs were to be mandated only in the context of a remedial action, this flaw would be magnified. Siemens added that there is no way to prevent interruption of signal availability (for example, in tunnels or when the driver turns it off purposefully).

Only a few commenters supported the proposal to allow non-integrally-synchronized EOBRs. Verigo described its PDA-based electronic logbook and questioned the justification for a more complex system. Xora supported non-integrally synchronized EOBRs on the basis of their lower costs and potential wider adoption. ATA stated it would support unsynchronized EOBRs only if: (1) Effective controls could be developed to prevent or minimize system weakness, especially deliberate blockage or loss of data; or (2) sufficiently severe penalties could deter these violations. CVSA believed untethered EOBRs might be possible in the future.

Response: After considering the comments on this issue, FMCSA decided to require EOBRs to be integrally synchronized with the CMV in which it is installed. This parallels the current requirement for AOBRDs in § 395.15. The definition of an “integrally synchronized” device in the final rule is as proposed in the January 2007 NPRM. The current definition of AOBRD in § 395.2 calls for the device to be “integrally synchronized with specific operations of the commercial motor vehicle in which it is installed.” It implicitly defines synchronization through a performance-based requirement: “At a minimum, the device must record engine use, road speed, miles driven, the date, and time of day.” The final rule is explicit in its definition: an integrally-synchronized AOBRD or EOBR must receive and record the engine use status for the purpose of deriving on-duty driving status from a source or sources internal to the CMV.

The NPRM based the proposed use of non-synchronized devices upon the assumed accuracy of those devices to measure the distance traveled by a CMV. After reviewing the comments that questioned those assumptions, FMCSA decided it would be prudent to conduct a limited field test of several of these devices. The Agency entered into an interagency agreement with the Volpe Center to perform this work. The results of this effort are documented in the report, “Evaluation of the Accuracy and Reliability of GPS-Based Methods for Measuring Vehicle Driving

Distance," which has been placed in the docket for this rulemaking.

The study assessed the performance of commercial off-the-shelf GPS receivers using various types of antennas and antenna mount configurations and waypoint time intervals (that is, time intervals during the trips) of 10, 30, 60, and 120 seconds. The vehicles' odometers were calibrated on a certified course and the GPS-derived measurements were compared to those corrected odometer readings. The accuracy for vehicle driving distance measurements made within this study ranged from 1.9 percent to 10.6 percent less than actual baseline driving distance. In light of this significant level of inaccuracy, FMCSA concluded that the integral synchronization requirement should remain.

6.6 Accuracy and Frequency of Data Recorded by EOBRs

6.6.1 Rounding

ATA and Werner stated the rule should not place a motor carrier that elects to use EOBRs at a disadvantage over those that do not. One specific issue was that of "rounding" information recorded on paper RODS to the nearest 15 minutes. ATA offered an example of a driver beginning to drive at 6:55 a.m. after a 10-hour off-duty period. If the driver used a paper RODS the time would be entered as "7:00 a.m.," and the driver would be in compliance with the HOS regulations. However, if "6:55 a.m." appeared on the RODS the driver would be in violation.

Response: In the situation these commenters describe, there is an inherent advantage for the use of handwritten RODS. The 15-minute grid on the RODS allows for flexibility in estimating start and stop times (*i.e.*, changes in duty status). Question 1 of the Regulatory Guidance for § 395.8 [available through <http://www.fmcsa.dot.gov>] states that short periods of time (less than 15 minutes) are to be noted in the Remarks section of the RODS. By contrast, a driver using an EOBR (or an AOBRD) could be cited for any time period over or under the prescribed requirements. However, FMCSA believes such small differences are not likely under most circumstances to warrant enforcement action, particularly when they are few and isolated.

6.6.2 Location Information, General

Two commenters addressed the precision of location information. KonaWare recommended a location precision only to the level of the nearest

city, with latitude-longitude data included in the detailed record to complement it. Qualcomm questioned the meaning of the phrase, "correspond to Census Bureau 2000 Gazetteer County Subdivision data," and whether that referenced source is the most current.

FedEx stated the Census Bureau 2000 Gazetteer "County Subdivision" data did not correspond to actual city names that would make sense to a person viewing the location. FedEx held the requirements in § 395.15(d)(1) give a person enough information to determine the location of status changes (*i.e.*, city, town, or village, with State abbreviation).

Response: FMCSA proposed to include latitude and longitude in the Data Elements Dictionary. The Agency proposed "nearest populated place" per Federal Information Processing Standard Publication 55 (FIPS 55) because "city" has a specific meaning under some States' laws: in some jurisdictions, there are many populated places in FIPS 55 that are not "cities." In response to Qualcomm's question, the County Subdivision information is contained in FIPS 55. The FIPS 55 data set has been integrated into the U.S. Geological Survey's Geographic Names Information System (GNIS), and all references to that source in the final rule will reflect this change.

6.6.3 Frequency of Recording Location Information (§ 395.16(f))

Many commenters believed the proposed 1 minute update interval was excessive and unwarranted. PeopleNet, XATA, Boyle Transportation, FedEx, and several others were concerned the size of the resulting dataset would lead to significantly higher onboard data storage and data transfer costs. Qualcomm, ATA, and others indicated such a frequent recording interval should not be required when the CMV's motion and mileage are determined through a synchronized, tamper-resistant interface with vehicle sensors.

The TMC TPA stated minute-by-minute location history should be required only for purposes of auditing GPS-based mileage accuracy of a non-synchronized EOBR. Also, XATA contended that the requirement for location recording frequency should take into consideration whether or not EOBR synchronization would be required.

ITEC recommended a recording interval of no less than every 5 minutes, citing reduced onboard storage, as well as data transmission and costs, both from CMV office and CMV roadside inspector's computers. PeopleNet suggested a 5- or 15-minute interval

might be sufficient so long as accurate mileage information were recorded from the CMV's electronic control module (ECM). FedEx recommended a 75-minute interval for sending data to the host (back office) and a 15-minute location record. CVSA supported the 1-minute interval and plus or minus 1 percent accuracy. DriverTech also supported the 1-minute interval.

Some commenters, including ATA, Tripmaster, and J.B. Hunt, recommended FMCSA retain the current requirement to record the CMV location only at each change of duty status. Werner cited its practice of receiving hourly updates of CMV position.

Response: FMCSA acknowledges the commenters' concerns about the proposed 1-minute recording interval. The final rule requires location and time to be recorded at an interval of no greater than 60 minutes while the vehicle is in motion. The reason for selecting an appropriate location-recording interval is to ensure travel distance and the associated driving time are recorded and reported at a level of accuracy appropriate to ensure HOS compliance. Based on the information provided by commenters and the Agency's decision to continue to require that on-board recorders be integrally synchronized, the Agency believes the new requirement achieves an appropriate balance between accuracy and affordability.

As discussed in the NPRM and in the preamble of this final rule, the Agency expects the addition of the requirement to automatically record location information will significantly improve the accuracy of driving time information.

6.6.4 Clock Drift

Qualcomm recommended several revisions to the proposed requirements, including a requirement for the clock drift tolerance for systems with or without mobile communications to not exceed 3 minutes at any time. These systems should be calibrated at least every 3 months. For systems *without* mobile communications, vehicle system clocks should be calibrated at least 3 times per year against an external trusted source. Motor carriers should maintain records of all clock recalibrations, including the degree of adjustment.

ATA stated the clock accuracy requirement should be realistic and the regulation needs to address how clock accuracy is managed. ATA cited the TMC TPA and its discussion of the Technology and Maintenance Council's Recommended Practice 1219(T) (TMC

RP 1219(T)). TMC RP 1219(T) recommends that clock drift be checked periodically. EOBRs with mobile communications and/or GPS may recalibrate, or use calibrated network or GPS time, on a continuous basis. Clock resets and recalibration adjustments should be made only by a trained technician. Adjustments that exceed the allowable threshold should be entered into the EOBR's maintenance record.

Werner asserted a requirement for clock accuracy would provide no significant benefit to the system. Werner cited questions raised in the TMC TPA, particularly the proposed 2 second per day time drift. Siemens stated the clock requirement is achievable, but will require a periodic synchronization with a trusted time reference. Tripmaster recommended FMCSA consider a requirement for clock time drift of less than 1 minute per month and that it be checked every 3 months.

The TMC TPA also provided specific recommendations for recalibration of EOBR clocks: (1) Clock drift should not exceed 1 minute with calibration required at least every 3 months; (2) clocks determined to drift more than an average of 1 minute per month must be repaired or replaced; (3) EOBRs with mobile communications and/or GPS should recalibrate or use calibrated network or GPS time on a continuous basis; (4) clock resets and recalibration adjustments (exceeding the allowable threshold) should be maintained with carrier records and should be made only by a trained technician.

Response: Section 395.16(e)(2) of the proposed rule addressed date and time information that could not be altered by a motor carrier or a driver. FMCSA is not specifying a maximum daily time drift in the final rule. However, § 395.16(e)(4) provides that the time deviation must not exceed 10 minutes from Coordinated Universal Time (UTC) at any time.

6.6.5 Distance-Traveled Accuracy (§ 395.16(g))

Several commenters expressed concern with the NPRM's proposal for accuracy of CMV distance travel: non-synchronized EOBRs, which obtain distance-traveled information from a source external to the CMV, must be accurate within 1 percent of actual distance traveled over a 24-hour period. Most comments centered on the difference between the proposed requirement in the NPRM for EOBRs and industry consensus standards for odometers. Qualcomm, ITEC, Xora, Tripmaster, and Siemens expressed concern that the NPRM's provisions did not align with the state-of-the-practice.

They cited SAE J1226, "Surface Vehicle Recommended Practice: Electronic Speedometer Specification—On Road." Section 5.1 of that document, Overall Design Variation, states the overall odometer accuracy "shall be within minus 4 percent to plus 4 percent for each actual unit of distance of travel over the operating range of the instrument. The design limits should not, however, be construed as absolute under all operating conditions." Thus, according to Qualcomm, the best-case scenario for a non-synchronized EOBR would be a plus or minus 5 percent error in the mileage calculation. In short, for systems capturing mileage from the vehicle ECM odometer, Qualcomm recommended the odometer should be maintained consistent with the vehicle manufacturer's specification for odometer recalibration.

Qualcomm and other commenters recommended FMCSA reference SAE J1708 ("Serial Data Communications Between Microcomputer Systems in Heavy-Duty Vehicle Applications") for communications with the vehicle data bus. Qualcomm also stated the requirements of § 395.16 should address conditions where location history data are incomplete due to limitations in obtaining satellite fixes and should specify when a driver should record HOS information in a paper RODS. ATA and Werner offered similar concerns. ATA stated odometer accuracy is outside the control of the EOBR supplier and excessive calibration requirements would be operationally problematic and costly.

ITEC and several other commenters noted, although recording to within 1 percent of the odometer is reasonable, the overall accuracy for distance data should be 5 percent because an absolute accuracy of plus or minus 1 percent of the actual distance may not always be achievable. A key reason is that the rolling radius of the vehicle's drive axle tires changes with ambient temperature, inflation pressure, load, and tire wear, and these changes can exceed 1 percent. An odometer is calibrated using the tire manufacturer's recommended revolutions per mile, and the vehicle owner must maintain this rolling radius when the vehicle's tires change from replacement, recapping, or regrooving.

Response: In § 395.16(g)(3), the Agency requires the distance-traveled information recorded by the EOBR should not be less accurate than the information obtained from the CMV's odometer.

Because FMCSA will allow only integrally synchronized EOBRs, the proposed rule text concerning distance-traveled information from a source

external to the CMV, is not included in the final rule.

Responding to the request to formally reference SAE J1708, we do not believe this is necessary because it is one of several engineering consensus standards that address on-vehicle communications networks that can provide engine use status. The Agency does not wish to preclude the use of other standards, existing or in development.

Concerning commenters' references to SAE J1226, FMCSA notes that this Recommended Practice also refers users to SAE J862, "Factors Affecting Accuracy of Mechanically Driven Automotive Speedometer-Odometers." Among other things, this document describes nine factors that can affect odometer readings, four of which relate to tires.

6.7 Review and Amendment of Records by Drivers (§ 395.16(h))

6.7.1 Driver Amendments of EOBR RODS.

Qualcomm recommended the regulations be more flexible to allow driver annotations of the records, to the same degree it is possible with paper RODS, to include annotating yard moves to reposition CMVs, as well as noting driving time in stop-and-go traffic. Qualcomm also asserted that driving status information automatically generated should not be subject to alteration, but a driver should be able to "claim" driving time if he or she neglected to log-on. Qualcomm recommended drivers should also be allowed to review and accept or reject any administrative amendments, and administrative staff be required to reconcile and assign all driving (vehicle movement) periods with drivers. Both drivers and administrative personnel should be able to annotate and reconcile manual data entries such as tractor and trailer numbers.

Werner sought clarification of the term "annotation," arguing the driver should be able to amend non-driving status periods at any time and should be able to request authorized administrative personnel to amend driving time entries, but disagreed that correction of typographical errors should generate an audit trail. The system should keep a digital record or other evidence showing any amendments made after the driving records were approved by the driver and identifying the amendments by time, date, personnel involved, and the reason for the amendment. Werner objected to limiting the driver to making corrections to the RODS only before the first driving period of the day or following the last

period of the day, because it would place an unnecessary burden on the driver and force a driver who has made an error to drive the rest of the day with incorrect records. According to Werner, driver acceptance of the technology is critical to its use in the industry, and every reasonable effort should be made to keep the systems forgiving and driver friendly. DriverTech stated allowances need to be made for legitimate truck moves.

DriverTech stated there needs to be a reasonableness factor to correct honest mistakes and suggested a limit of one duty status correction per 24 hours. The TMC TPA stated that the data capture and data integrity requirements proposed in the NPRM needed better definition and improved usability. For example, they recommended that for the most common cases, the driver and administrative records amendment process needs to be more thoroughly defined and practical to ensure drivers submit complete and accurate electronic logs. The process of making and reviewing amendments made by administrative personnel needs to address more specific situations. TMC RP 1219(T), currently under development by the ATA Technology and Maintenance Council S. 12 Onboard Vehicle Electronics Study Group, outlines a recommended process that it believes better ensures data accuracy and accountability. Automated recording of duty status changes and effective recording of overrides need more specificity to address yard moves and stopped-in-traffic scenarios. RP 1219(T) recommended amendments be limited to eight specific items.

Response: In § 395.16(h)(3), FMCSA selected the term “annotate” rather than “amend.” Annotating a record implies adding information, generally for the purpose of clarifying it. Amending a record implies changing it. An EOBR must automatically record driving time (§ 395.16(d)(1)) so there should be no need for a driver to request designated administrative personnel to amend a driving record. Section 395.16(h)(3) has been revised to include use of a CMV as a personal conveyance. It requires the driver to annotate the corresponding driving time entry to reflect such use.

As discussed earlier, § 395.16(d)(1) requires the EOBR to automatically record driving time. Altering driving time records is prohibited. However, remarks may be added to annotate the record. Section 395.16(h)(3) has been revised to address this.

6.7.2 Other Comments on Driver Interaction With EOBRs

Several commenters offered recommendations about driver interaction with EOBRs. Several commenters offered recommendations about driver interaction with EOBRs. For example, when team drivers use a CMV equipped with an EOBR, they suggested the non-driving team member be allowed to make entries in the EOBR while the CMV is moving. Others suggested a method for the driver to override pre-programmed duty status change thresholds (such as between driving and on duty). Still others recommended FMCSA consider adding distance and time thresholds for “yard moves” and for “non-allocated driving time.”

Werner stated there had been little consideration or analysis of driver acceptance. The ideal system should take into account the need for driver training and the differing levels of technical sophistication.

Response: This rule does not alter the treatment of the duty status of team drivers. The final rule allows annotations of the EOBR’s electronic RODS. Whether an annotation is characterized as an “override” or by another term, the annotation must add information to the HOS record—it must not overwrite or delete information. Because of the enormous variations in motor carriers’ individual policies and practices, FMCSA does not believe it would be appropriate to establish a single uniform threshold for non-allocated driving time.

Today’s rule, like the 1988 AOBRD rule, is performance-based and anticipates developers of EOBRs will work with their motor carrier clients to ensure the devices are appropriately designed and configured. Motor carriers must ensure drivers are trained to use the new EOBRs properly.

6.8 Safety Officials’ Access to HOS Information

6.8.1 EOBR Must Be Capable of Producing Duty Status Records for the Current Day and the Previous 7 Days (§ 395.16(k))

Werner asked if an EOBR needed to retain 7 days of RODS in the device itself, or if the information could be stored on a server. Werner also asked for clarification on provisions for safeguarding and retention of transferred data to portable computers used by roadside inspection officials.

Response: RODS data need not be stored on the EOBR. Section 395.16(k)(1) allows use of “information stored in and retrievable from the EOBR

or motor carrier support system records.” As is the case in the current AOBRD rule, § 395.15(b)(4), HOS data must consist of information “stored in and retrievable from” the device. As for enforcement officials’ duties regarding safeguarding and retention of information is concerned, the HOS information they obtain from (or via) EOBRs must be handled and safeguarded in the same way as other records obtained during the conduct of enforcement activities. (See preamble section IV. Discussion of Comments to the NPRM; 5. Privacy, Agency response.)

6.8.2 EOBR Must Be Able To Produce, Upon Demand, a Driver’s HOS Chart Using a Graph-Grid Format in Either Electronic or Printed Form (§ 395.16(i) and (n))

CVSA supported the use of a graph-grid format. However, numerous commenters, including Qualcomm, Tripmaster, the TMC TPA, Werner, and ATA questioned the need for the EOBR device itself to produce the graph-grid format.

Qualcomm, Tripmaster, and ATA believed the display requirements should be limited to specific information (such as driver information and the sequence of changes of duty status) in the vehicle, and other data should be made available by electronic data transfer or reports from a motor carrier’s office system. Werner, XATA, and the TMC TPA suggested, other than placing HOS information in a familiar format, there is no real reason for an EOBR to display data in a graph-grid format they believe computers used by roadside safety personnel should be able to handle this task. The Maryland SHA offered a similar comment. Conversely, ITEC stated it did not believe the data format provided in Appendix A, Table 1, could be used to produce a graph-grid.

Qualcomm and ATA noted many legacy systems and devices could potentially meet proposed EOBR requirements, save two: the proposed display requirements and the viewable-outside-the-cab requirement. The latter is a concern because many new devices are dashboard-mounted. Because the format specification does not address requirements for display size, character resolution, scrolling, and navigation, they question how usable the display would be.

A motor carrier questioned whether EOBRs could produce the required HOS information, and another contended FMCSA did not offer a standardized method for retrieving EOBR recorded data because not all agencies will have

the proper equipment to access a driver's logs.

A few commenters offered alternatives, such as using an integrated printer with the EOBR rather than a mobile display. One asked how an alternative display format would be approved.

The Maryland SHA stated the requirement that the data be displayed in "either electronic or printed form" presents problems. If the EOBR provides the HOS information in electronic format only, the officer will have no substantive evidence or paper copy for court purposes, which will hamper adjudication processes. Maryland SHA urged FMCSA to assess how these changes will impact roadside enforcement activities, as not all enforcement officers have laptop computers from which to receive or review HOS data retrieved from an EOBR.

Response: The provision at § 395.16(i)(2) would allow electronic transmission of an EOBR-generated RODS for display on another device, such as a PDA or portable computer used by a safety official at a roadside inspection. FMCSA amends paragraph (i)(2) and subsection (n) to clarify the requirement for the EOBR to enable RODS data to be transferred to an enforcement official's PDA or portable computer. The Agency also revises the rule text to remove the proposed design requirement to display the graph-grid on the EOBR device.

The Agency also clarifies that data transfer methods discussed in the NPRM and adopted in this final rule are meant to facilitate a one-way transfer of data from the EOBR to the enforcement official's computer and not the reverse. Several commenters appeared to interpret this provision as a requirement for EOBRs to be able to interact with each other, and for any EOBRs to be able to interact with any office support systems. FMCSA leaves the decisions on whether to provide this level of interoperability to EOBR system providers. Rather, the proposed specifications were developed based on the assumption the Agency would provide the software capable of: (1) Initiating the data transfer, (2) transforming the EOBR-generated standard flat file into the desired graphical output on enforcement officials' electronic equipment (*i.e.*, computer, PDA, *etc.*), and (3) determining whether the RODS information was in compliance with 49 CFR part 395.

EOBR system suppliers and motor carriers would not need to determine how to achieve interoperability with

enforcement officials' various types of equipment and software. Under the Motor Carrier Safety Assistance Program (MCSAP), enforcement officials operate FMCSA-approved hardware with inspection software compatible with FMCSA systems to conduct roadside inspections. The proposed data format and transmission protocols have been tested to work with enforcement officials' tools. This was the rationale for proposing the EOBR make data available in a flat file format, the simplest of formats (as opposed to requiring a specific hierarchical or relational database form), and for setting forth specific communications protocols.

The same would apply to information generated by the motor carrier's office systems. The safety investigator uses FMCSA-approved equipment and FMCSA-issued software to conduct the compliance review at the motor carrier's place of business. Systems capable of producing the flat file delineated in Appendix A to part 395, Table 2, would be fully compatible with the compliance review software, and they would meet Agency requirements under the new § 395.16(i).

Responding to the SHA, FMCSA will require EOBRs display the driver's duty status sequence, as is currently required for AOBRDs. The Agency will also require drivers' HOS records be made available in digital form to inspection officials.

6.8.3 EOBR Must Be Able To Produce Upon Demand a Digital File of the Driver's HOS (§ 395.16(i)(2))

The TMC TPA stated security of digital EOBR data needs to be considered, citing security threats external to the EOBR in the data transfer process. Xora supported an EOBR that could obtain HOS information from a centralized server, and one that could be physically handed to roadside inspection officials. Werner asked FMCSA to define "immediately" in the context of an inspection. It noted a driver will need the opportunity to verify the recently created logs for accuracy. If the system maintains the log data off the truck for some or all of the period being checked, a reasonable delay may be incurred in sending the data to the truck in some form.

Response: Motor carriers and their EOBR system providers must use appropriate methods and procedures in the development, testing, and operation of HOS information systems to ensure data and information integrity. Rather than specifying testing and assessment procedures, the Agency again focuses on performance requirements for the EOBR

user. Under new § 395.16(o)(2), the EOBR and associated support systems must not permit alteration or erasure of the original information collected concerning the driver's hours of service, or alteration of the source data streams used to provide that information, and under § 395.16(p)(1), the motor carrier must not permit or require alteration or erasure of the original information collected concerning the driver's hours of service, the source data streams used to provide that information, or information contained in its EOBR support systems that use the original information and source data streams.

As to defining "immediately," FMCSA requires CMV drivers to maintain their EOBR records current to the last change in duty status and encourages safety officials to exercise reasonable discretion in allowing the drivers sufficient time to access the HOS records from the EOBR, or from the motor carrier's support system.

6.8.4 Information Must Be Accessible to Safety Assurance Officials Without Requiring Them To Enter In or Upon the CMV (§ 395.16(i)(4))

CVSA supported the requirement that information displayed on the EOBR be accessible to safety assurance officials without requiring the officials to enter in or upon the CMV. However, one driver stated moving the EOBR in and out of the truck would lead to electronic problems. He suggested using a cable to connect it to a computer.

Response: FMCSA agrees with CVSA. The final rule will retain the proposed requirement that information displayed on the EOBR be made accessible to safety assurance officials without requiring them to enter in or upon the CMV. It will not be necessary to physically remove an EOBR from its mounting in a CMV cab. The enforcement official will provide a cable to the driver to plug into the EOBR, or request the driver initiate a wireless transfer of the RODS data to the officer's portable computer.

6.8.5 Electronic Records Must Be Transferable to Portable Computers in the Specified Format (§ 395.16(i)(6))

A number of commenters provided comments related to the need for safety officials to obtain digital records from EOBRs to conduct roadside inspections. CVSA held EOBRs should use standardized data formats and have a standardized interface for law enforcement so that training, compliance evaluation, and monitoring are effective and simplified. CVSA stated it would be better to equip

inspectors to print the record, which they will need as evidence.

Regarding security encryption, data security, and how these interact with enforcement roadside computers, the SHA commented that not all MCSAP agencies' safety inspection officials have laptop computers in their patrol vehicles and or wireless platform capabilities from the patrol vehicle.

Ohio PUC stressed the need for technological solutions to improve inspection officials' ability to read and interpret electronic HOS records. The MTA and OOIDA also stressed the need for training these officials in the use of EOBRs and interpretation of HOS data.

CVSA stated electronic records must adhere to common, uniform, and strict standards so inspection officials can read the data on laptops or handheld computers. However, CVSA had concerns with the possibility of these files introducing a virus or otherwise damaging the inspection official's operating system or software.

Qualcomm stated the use of XML or other file formats should be considered for Internet file transfers. It is also recommended the specifications be deferred to an industry standards approach to address any ongoing changes in security, technology, or data requirements, rather than by including them in a regulation. The TMC TPA offered a similar comment related to insulating a regulation from technological change. The document advocated a hardwired connection between the EOBR and the vehicle data bus and a network neutral wireless connection to obtain data via the Internet from a secure server. ITEC stated it assumed that, because it was not discussed, FMCSA did not intend to require that EOBR data be downloaded onto portable media. Werner questioned the cost of being able to download data.

Ohio PUC stated the rule must have verifiable provisions to ensure EOBRs are standardized with a uniform format that all carriers must use to display information. These must be easily read by roadside inspection personnel and designed to include a standard means of allowing enforcement personnel to download information from the devices.

Response: FMCSA agrees with commenters that it will be critical for roadside inspection officials to be prepared to interact with the new EOBRs. The Agency has set the compliance date to provide sufficient time for this transition. As discussed above, the final rule specifies the use of standardized file formats and communications interfaces to support the needs of safety officials operating in the field.

6.8.6 Communications information interchange methods (§ 395.16(i))

Qualcomm, TMC, ITEC, Tripmaster, and ATA opposed the wireless information interchange standards cited in the proposed rule because they would be likely to become outdated. The TMC TPA stated the wireless methods are prone to connection management, interoperability, and security issues, as well as changes in technical standards.

Qualcomm recommended FMCSA use TMC RP 1219(T) for technical requirements. In addition, they recommended citing SAE J1708, "Serial Data Communications Between Microcomputer Systems in Heavy-Duty Vehicle Applications," in reference to wired communications links using the vehicle data bus. They also recommended FMCSA consider referencing SAE J1939, "Recommended Practice for a Serial Control and Communications Vehicle Network." Qualcomm also asked FMCSA to consider submitting a standards request to the Society of Automotive Engineers subcommittees for J1939 and J1708 to address tamper-resistance technical specifications for capturing information from electronic control modules transmitting over the vehicle data bus.

Qualcomm and the TMC TPA recommended two methods for information reporting they believed would be technology neutral for EOBR devices and are expected to have significant longevity in availability. They recommended use of the vehicle data bus for a wired data transfer from the EOBR to a roadside inspection device (because this approach is similar to that used for on-board diagnostic (OBD) emissions inspections); and use of the Internet for wireless data transfers from the EOBR (device and/or support system) with the roadside inspection system (device and/or host support system). Although they noted additional security standards would be required to ensure proper authentication between devices and data transfer security, they recommended these be addressed through industry standards rather than by regulation.

Qualcomm and the TMC TPA both believe use of Universal Serial Bus (USB) or a serial port would not be appropriate for a wired data transfer. They cited problems with pin configurations and software driver requirements, as well as the long-term viability of wired USB, because wireless USB standards are under development. On the other hand, they appear to favor use of the Internet for wireless data transfers from the EOBR (and/or its

support system) to the roadside inspection system (device and/or host support system). Many EOBR systems maintain near real-time communications with secure centralized support systems, and they believe virtually all safety officials conducting roadside inspections can use network connectivity to retrieve this information from a support system (or directly) with Internet file transfers. Qualcomm believed the Internet file data transfer approach will be able to accommodate changes in wireless communications standards and has high probability of still working flawlessly over a 10-year or longer time frame.

Qualcomm held use of Wireless Local Area Network (WLAN) and Wireless Personal Area Network (WPAN) technologies for peer-to-peer wireless connections are not appropriate in EOBRs and law enforcement systems because they have significant security vulnerabilities and are prone to connection management issues.

Qualcomm also supported wired transfer via the CMV's data bus. Qualcomm, Tripmaster, and ATA referenced TMC RP 1210(B) (Serial Communications Application Program Interface). For wireless, they referenced RP 1216 (the vehicle-to-office data communications standard). Qualcomm stated the latter standard brings efficiencies to the industry because it puts aside any proprietary communications protocols and allows for wireless communications (via radio frequency, infrared, satellite, cellular, or WLAN) between a trucking company's office and its fleet.

ITEC recommended dropping the Bluetooth wireless standard, which is not interoperable with IEEE 802.11 and RS-232 (which is out-of-date), and adding IEEE 802.11p. ITEC-supported USB 2.0.

CVSA suggested that, while FMCSA may not want to specify the communications technologies because they change so rapidly, the more important aspects related to the data are security, content, and timeliness of the information availability. Werner stated any wireless access should be adequately protected.

KonaWare stated FMCSA should not specify data transfer technology. If data transfer is needed, submission of data to law enforcement within 48 to 72 hours should be acceptable.

Siemens expressed concern about costs for wireless data extraction. Although they noted FMCSA included these costs in its estimate of operating costs as a necessary item for mobile phone solutions and fleet management systems, they were concerned these

costs were not addressed for minimally compliant, tethered EOBR solutions that could use other methods to transfer data for backup purposes. Siemens was concerned owner-operators, small carriers, and carriers operating within limited geographic areas would not benefit from wireless data extraction of HOS data.

PeopleNet stated the records should be available in wireless or wired format, but not both. FedEx stated the protocols and application interfaces needed to perform the data download are not defined. A great deal of definition would be required to successfully implement a roadside exchange as suggested in the NPRM, and changing technology could make several of the suggested physical transport layers obsolete. FedEx suggested wireless as a transport layer (802.11g and Bluetooth), but stated the pairing methodology between EOBR and roadside device must be defined. It also stressed the need for the Agency to define a method for authentication between the EOBR and roadside device, an especially important concern if the Agency contemplated using wireless technology.

Response: The final rule requires the use of wired (direct physical connection) and wireless communications (WiFi and cellular, as described in more detail below) of the electronic RODS data record. For a wired transfer, the roadside enforcement official will provide a cable to the driver to be inserted into the EOBR's USB data port.

FMCSA is revising the requirements for the content of the data file that would be downloaded from an EOBR to an enforcement official's portable computer to remove the name of the driver and co-driver in the records downloaded at roadside. The driver and co-driver will be identified by employee identification number(s) in that downloaded record. Enforcement officials may verify the identity of the driver (and co-driver) from documents such as a driver's license and would enter that information into their portable computers to generate inspection reports and violation documents. This change is being made because the combination of a name and other information in a transmitted record places the record in the category of personally identifiable information (PII). PII must be encrypted, and encryption adds considerably to the complexity of software design, implementation, and maintenance. These factors would increase the costs to EOBR suppliers, motor carriers, and FMCSA. FMCSA stresses this change

affects only those records downloaded at roadside. All other records maintained in EOBRs and support systems must include the driver's and co-driver's names. This includes records requested by safety assurance officials at a motor carrier's place of business.

The primary goal of the EOBR device itself is to collect and safeguard data. There are numerous industry consensus standards and recommended practices in this field, and FMCSA believes developers of EOBRs and EOBR support systems are in the best position to select and use those standards and practices to ensure their motor carrier customers are able to maintain the confidentiality, integrity, and availability of HOS data and information.

To ensure a reliable means of data exchange between each EOBR device and a roadside safety official's portable computer, the following hardware interface specifications are required:

1. Each EOBR device must implement a single USB compliant interface featuring a Type-B connector.
2. USB interface must comply with USB V1.1 and V2.0 USB signaling standards.
3. The USB interface must implement the Mass Storage class (08h) for [software] driverless operation.

FMCSA will not allow the use of portable storage devices, e.g., thumb drives, for the transfer of the electronic RODS because they are not capable of meeting the necessary authentication requirements.

6.9 Identification of the Driver (§ 395.16(j))

6.9.1 FMCSA's Approach of Not Specifying Identification Method

CVSA supported the idea of providing flexibility regarding how drivers are identified. However, CVSA said FMCSA should specify a minimum performance requirement including standardized and explicit test procedures and expectations. ITEC approved of the decision to allow motor carriers to choose among competing technologies for driver identification. The company said driver identification technologies would be a key cost factor in the implementation of EOBRs.

Several commenters, including IBT, OOIDA, and AMSA, disagreed with FMCSA's approach, contending the rule should be more specific regarding the identification of drivers. IBT was concerned unscrupulous drivers' use of false identification could undermine efforts to improve HOS compliance. Qualcomm, Siemens, and the TMC TPA said the rule should have security requirements that address detailed

policies and procedures for driver identity management. They also requested the requirements cover the use of third parties for EOBR security administration and audit.

One commenter recommended using employee ID numbers to identify drivers, while another proposed using an identification code made up of the driver's license number and the abbreviation of the issuing State.

Response: FMCSA agrees the identification of the driver of a CMV is key to implementation of this rule. However, imposing a set of standards to assign and manage driver and employee identification numbers is unnecessary to effectuate this rulemaking and is more appropriately addressed through motor carriers' internal processes.

This final rule requires the driver's name as part of the EOBR's record maintained by the motor carrier. However, it will not require the driver's name to be part of the information transmitted from the EOBR or a support system during the course of a roadside inspection because the combination of a name and the other information is considered personally identifiable information and is subject to stringent and complex encryption requirements. As discussed earlier, enforcement officials will verify the identity of the driver (and co-driver) from documents such as a driver's license.

FMCSA's interest is that each driver used by a motor carrier is uniquely identified for purposes of recordkeeping and the motor carrier ensures that drivers enter duty status information accurately. How individual drivers are identified—by name, by employee number, or by another code—is left to a motor carrier's discretion. However, we very strongly discourage a motor carrier from using a Social Security number or driver's license number because of the potential for persons to obtain access to information that is not relevant to HOS compliance assurance. It is a motor carrier's responsibility to select and implement information security policies—including issuing and updating identification and information system access codes—appropriate to its own operations.

Responding to Qualcomm's question concerning recording the hours of drivers who use more than one vehicle, an EOBR support system must account for this, as today's AOBRDs are required to do. Although not explicitly required in the regulation, error-checking procedures in the support system also should flag a driver who is shown as operating multiple CMVs on the same day, during the same period of time. AOBRDs have been required to identify

which driver of a team is operating the CMV at any given time—and EOBRs must do the same. Each driver must be assigned a unique identifier.

6.10 Maintenance and Repair (§ 395.16(p))

6.10.1 Motor Carrier Must Ensure EOBRs Are Calibrated, Maintained, and Recalibrated

Werner said the requirement for motor carriers to ensure EOBRs are calibrated, maintained, and recalibrated should not be imposed without serious cost/benefit analysis. The carrier said this requirement could be a substantial burden for many carriers who have trucks that are not home-based at a terminal.

Qualcomm and TMC said the requirements for motor carriers should also address security management and administration of EOBR systems. They also said the rule should provide criteria for when third-party services must be used if carriers do not have appropriate resources for security management.

Maverick Transportation asked FMCSA to clarify how often EOBRs would need to be recalibrated and how long a carrier would need to retain calibration, maintenance, and recalibration records.

Response: Section 395.15(i)(8) of the current regulations requires that AOBRs be maintained and recalibrated in accordance with the manufacturer's recommendations. Considering the range of approaches (now and in the future), it would not be realistic for FMCSA to specify maintenance intervals for EOBRs. The text of the rule adopted here parallels the proposed regulation but adds a requirement for calibration. This initial calibration would be done at the time of initial installation, if the characteristics of the device require it. Concerning security management and administration, those are information technology matters, and any third-party performing this work for a motor carrier would do so as the carrier's agent and under the carrier's direction. Retention of EOBR maintenance and calibration records is addressed in the general inspection, repair, and maintenance requirements of current § 396.3, because an EOBR, like an AOBRD, is an "additional part or accessory which may affect safety of operations." These records must be maintained for 1 year or 6 months after a CMV leaves the motor carrier's control.

6.11 Testing and Certification Procedures

6.11.1 Manufacturer Self-Certification (§ 395.16(q))

Qualcomm expressed support for the provision allowing EOBR manufacturers to self-certify their products. The company said the self-certification approach is consistent with the requirements in § 395.15 and should be continued. Maverick Transportation agreed with manufacturer self-certification, but asserted EOBR manufacturers should face penalties if their products are later found to be non-compliant.

Conversely, several motor carrier and EOBR manufacturer commenters believed FMCSA's proposed requirement for AOBRD and EOBR manufacturers to self-certify their devices did not provide a sufficient level of assurance to convince carriers to voluntarily use EOBRs. These commenters indicated carriers would be more willing to invest in EOBRs if FMCSA or an independent testing entity evaluated and certified devices as conforming products. J.B. Hunt stated that, because most of today's EOBR manufacturers are small businesses, they probably would not have the financial resources to properly indemnify the carrier if FMCSA were to find the devices noncompliant. Werner made similar comments, noting the contracts offered by EOBR vendors would likely restrict a carrier's right to recover from the vendor if the system were found to be non-compliant.

CVSA recommended FMCSA and the National Highway Traffic Safety Administration create a more rigorous, third-party certification program for EOBRs. It also recommended the establishment of an advisory board to create and maintain a list of approved EOBRs. This advisory board could operate similarly to those groups that are involved with speed-measuring instruments and breath alcohol testing devices.

Qualcomm and ATA offered the alternative of "strong self-certification." An international standard, ISO/IEC 17050, would be used as a basis for requiring manufacturers to document their conformance with a standard. An EOBR manufacturer's declaration of conformity would be subject to standardized documentation requirements and audits. They noted this approach would require a government or industry entity to audit supporting materials for conformity declarations and to maintain a registry of conforming products. ATA stated such an authority does not currently

exist. Tempering its support of third-party certification, ATA cautioned that FMCSA should balance the potential benefits of third-party certification against the potential for increased cost of EOBR devices and possible delays in the introduction of new devices and technology due to the need to satisfactorily complete a certification process.

Response: The Agency is aware that a working group of the ATA's Technology and Maintenance Council S. 12 Onboard Vehicle Electronics Study Group is currently preparing a draft recommended engineering practice, TMC RP 1219(T), "Guidelines for Electronic On-Board Recorders." Several commenters included this document as an attachment to their comments. Although the final rule does not establish a formal FMCSA oversight process for EOBR testing and certification, it is possible that more widespread use of EOBRs may bring compliance concerns to light. Therefore, FMCSA will monitor motor carriers' compliance with EOBR and support system requirements as part of its safety oversight programs.

6.11.2 Other Comments on Testing and Certification Procedures

The Ohio PUC asked that the rule provide for periodic certification of the reliability and integrity of EOBRs, with specific penalties for failure to comply; and it maintained widespread violations could occur without such provisions. The MTA suggested the rule require EOBR manufacturers to warranty performance of their products for at least 5 years.

Response: FMCSA takes seriously penalties related to false records but does not believe it would be appropriate to set a prescriptive requirement for "recertifying" EOBRs according to a fixed schedule. The self-certification process will remain part of the FMCSRs. FMCSA does not have the authority to impose a requirement for a warranty period or warranty terms.

6.12 Other Comments on Proposed EOBR Standards

Several commenters believe the NPRM did not adequately address a requirement to make EOBRs "tamper-proof." Siemens said FMCSA should require EOBRs to be tested and certified against a defined security standard by independent laboratories. Advocates criticized FMCSA for proposing no specific controls for ensuring that EOBRs are tamper-proof, contending the Agency "must set minimum requirements for what constitutes tamper-proof or tamper-resistant EOBRs

and their key components.” Advocates called upon FMCSA to ensure that EOBRs are both tamper-proof and designed to indicate any attempts at tampering. CVSA suggested FMCSA review the EU Information Technology Security Evaluation process with regard to EOBRs. A team driver who had used an EOBR said her motor carrier had altered the hours recorded by the device, and FMCSA must ensure against improper alteration of data by drivers, carriers, or law enforcement personnel. Two commenters said the burden of making EOBRs tamper-proof should rest on the shoulders of the manufacturers and FMCSA, and that all aspects of tampering should be resolved before installation.

Response: The September 2005 report prepared by the Volpe Center: “Recommendations Regarding the Use of Electronic On-Board Recorders (EOBRs) for Reporting Hours of Service,” addresses a range of methods to prevent, to the greatest extent practicable, tampering with the physical EOBR device, as well as the electronic records it holds. The revised text of § 395.16(p)(1) prohibits the motor carrier from permitting or requiring alteration or erasure of original information or the source data streams used to provide it. This covers both physical and electronic alterations and erasures.

FMCSA reviewed the EU type-specification for electronic tachographs early in this rulemaking process. The type-specification is highly design-prescriptive for both the hardware and software elements of the electronic tachograph and support systems. By contrast, FMCSA regulatory policy expresses a strong preference for performance-based regulations. Furthermore, because the EU directive for the electronic tachograph is based upon a compliance-assurance model that is dramatically different from that of FMCSA, FMCSA continues to believe adopting it would be inappropriate. And, as discussed above, the final rule will continue to require manufacturer self-certification of EOBRs and their support systems.

6.12.1 Environmental Specifications

For operating temperature, Qualcomm and ITEC said the typical industry standards for device functionality while installed in commercial vehicles (−40 to 85 °C) exceed the rule’s requirements for the temperature range at which EOBRs must be able to operate (−20 to 120 °F (−29 to 49 °C)). Both commenters suggested the rule defer to industry standards for environmental performance, specifically SAE standard

J1455, “Recommended Environmental Practices for Electronic Equipment Design in Heavy-Duty Vehicle Applications.” TMC offered a similar comment.

NTSB stated the NPRM failed to address damage-resistance and data-survivability, and asked for performance standards for these issues.

Response: FMCSA agrees with Qualcomm, ITEC, and TMC and in the final rule revises the environmental operating ranges (temperature, *etc.*) for EOBRs. In response to NTSB, FMCSA considers it appropriate to require EOBRs to comply with the same generally-accepted industry consensus standards for durability and reliability as other electronic components used in trucks and buses, but not to go beyond these standards in terms of crash- or fire- survivability.

6.12.2 Reconstruction of RODS After EOBR Failure

Werner and the Maryland State Police questioned the requirement that a driver reconstruct RODS for the past 7 days in the event of an EOBR failure. The two commenters doubted that drivers would be able to do this unless the data had been printed out, transmitted to the carrier, or backed up in some other way.

Response: Records must be available for the current day and the past 7 days so safety officials can review them during roadside inspections. This is not a new requirement; it currently applies to both paper RODS and AOBRDs (§§ 395.8(k), 395.15(b)(2)). The 7 days’ worth of records can include those records already transmitted to the motor carrier.

6.12.3 Requirement To Carry EOBR Instructions and Blank RODS (§ 395.16(l))

ITEC said the rule should be clarified to allow a motor carrier to maintain the EOBR instruction sheet and blank RODS forms either separately or together. Qualcomm expressed support for the requirement that CMVs carry instructional material. TMC TPA suggested FMCSA be more specific about the content of the instruction sheet to assure greater consistency and usability.

Response: The requirement in the final rule is identical to the current one for AOBRDS (§ 395.15). It does not specify that the instructions and blank RODS forms be bound in a single document, only that the driver have both of them on board the CMV.

7. Incentives To Promote EOBR Use

FMCSA is adopting as proposed two incentives for motor carriers that

voluntarily install and use EOBRs compliant with section 395.16. First, after the traditional targeted review of their drivers’ HOS compliance, FMCSA will conduct random reviews of such carriers’ drivers for purposes of determining these carriers’ safety ratings. Second, such carriers will be granted relief from the supporting documents requirements for purposes of recording on-duty driving time. FMCSA requested comment on these two incentives, as well as on possible additional incentives, including granting flexibility in the HOS rules themselves.

7.1 Random Review for Motor Carriers Voluntarily Using EOBRs

Numerous commenters, including Report on Board, Werner, Maverick, SCRA, and IIHS, said random review of a motor carriers HOS compliance, as opposed to a focused review, would not provide enough incentive to make voluntary installation of EOBRs attractive. Both IIHS and Report on Board held only a mandate requiring EOBRs will work. Report on Board commented that carriers believe they are competitively disadvantaged by using EOBRs. Because focused sampling would continue, with violations imposed based on that sampling, it felt that there would be little reason for carriers to voluntarily adopt EOBRs.

SCRA stated there were no statistical data provided on safety enhancement or cost benefits to support this element of the proposed rule, arguing that application of technology should provide tangible cost benefits and easily recognizable advantages for all required to comply.

Several commenters objected to the incentive because they believed it would place some carriers at an unfair disadvantage. OOIDA stated FMCSA is proposing to lessen scrutiny of carriers that adopt EOBRs while increasing scrutiny of other carriers, most of whom will be small. OOIDA also stated the proposal is inconsistent with CSA 2010 since that initiative relies heavily on focused review of problem drivers based on roadside data. “Without any proof that EOBRs improve HOS compliance or the safe operation of commercial motor vehicles, FMCSA cannot justify the creation of such a dichotomous enforcement strategy.” One carrier was also concerned the proposal places small carriers at a disadvantage because they cannot afford EOBRs, and they will be given the same scrutiny as those mandated to use EOBRs.

While Maverick supported the random sampling incentive, Advocates stated the implication is that the

outcome of EOBR use is not improved oversight and enforcement of safety management controls. Advocates asserted the proposal would lead to “more extensive HOS violations and lack of enforcement.”

Response: One objective of CSA 2010 is to leverage the capabilities of existing technologies to make compliance and enforcement efforts more effective and efficient. FMCSA believes policies that encourage the adoption of EOBRs are consistent with CSA 2010. (See the earlier discussion of CSA 2010 and roadside data in preamble section IV. Discussion of Comments to the NPRM; 3.2 *Trigger for remedial directive*. The motor carrier industry previously expressed concern that FMCSA’s current HOS sampling techniques during compliance reviews are not random across all areas of a carrier’s operation. Rather, the compliance review procedures direct the safety investigators to focus on known problem areas and drivers first. If the number of violations discovered using the existing policy of focused sampling exceeds 10 percent of the records reviewed, a less than satisfactory safety fitness rating is proposed. Thus, industry members argue, a motor carrier’s overall safety fitness rating can be adversely affected based only on a focused review of known problem drivers or areas of a motor carrier’s operation without consideration of a motor carrier’s overall HOS compliance status or violation rate.

FMCSA does not agree that motor carriers under the proposed incentive will be subject to less-thorough reviews. Under the incentive proposed and adopted today, all motor carriers taking advantage of this incentive, and all owner-operators leased to such carriers, will be subject to the same level of initial review as under current procedures, which focus first on drivers involved in crashes and those with known HOS violations. Violations resulting from this initial focused sample will continue to be considered for compliance improvement and enforcement purposes. However, under the incentive, a CR that revealed a proposed 10 percent or higher violation rate based on the *initial* focused sample will be expanded through *random* sampling to look at a broader segment of the motor carrier’s overall operation. Only the HOS violations resulting from this expanded review will be used to determine a carrier’s safety rating.

This incentive is justified on several grounds. The HOS portion of CRs on motor carriers using EOBRs can be done far more efficiently than traditional reviews of logbooks and supporting

documents, thus allowing motor carriers—as well as FMCSA reviewers—to do more thorough and comprehensive checks of HOS records for accuracy and possible falsification. The Agency expects EOBR use to lower voluntary-adopter-carriers’ rates of serious HOS violations, which, as noted above, are related to higher than average crash rates. As a result, safety will be promoted. Because civil penalties will still be imposed and SafeStat scores will still be affected if violations are discovered during the targeted review, carriers will continue to be motivated to correct HOS compliance problems. See 72 FR 2378–2379. FMCSA emphasizes that the Agency will continue to bring civil penalty enforcement cases against both drivers and carriers for HOS violations discovered during the initial focused HOS review, even though that analysis will not be used for purposes of determining the carrier’s safety rating.

7.2 Partial Relief From Supporting Documentation (§ 395.11)

Several commenters, including Maverick, SC&RA, TCA, J.B. Hunt, and AMSA, generally supported the incentive providing relief from the requirement to maintain supporting documents relating to driving time. Commenters, including Maverick and SC&RA, stated EOBRs will capture much of the same information as supporting documents. Continuing to require supporting documents becomes a disincentive for using EOBRs.

AMSA stated retaining and reconciling such corroborating documents is a financial, storage, and organizational burden on carriers, and relief from these burdens might provide the desired incentive for a carrier to consider adopting EOBRs. ATA stated that managing supporting documents takes 258 million hours a year; the potential costs could be billions of dollars. FedEx noted the NPRM claimed the EOBRs would reduce compliance costs and increase productivity, but if the supporting document requirements are not dropped, those claims were overstated or wrong. If regulators require or allow technology to replace paperwork for HOS, FedEx commented the Agency should replace all paperwork for that requirement. Otherwise, it is an indication that either the technology is not ready for implementation or the technical specifications should be revisited.

MTA, Boyle, NPTC, ATA, and FedEx sought elimination of the supporting documents requirement for those with EOBRs. NPTC stated companies that use EOBRs to supervise driver operations and have effective management systems

should not be required to undertake the additional administrative task of collecting and maintaining supporting documents to verify the non-driving portion of a driver’s hours. If a company is found to be significantly non-compliant in its HOS management, NPTC asserts FMCSA could use its enforcement authority to impose additional and more stringent supporting document requirements on that carrier and its drivers.

In contrast, J.B. Hunt said supporting documents cannot be eliminated, but carriers should not have to retain documents that show only time and location. If the document does not have any objective information that discloses the driver’s non-driving activities, it would not be of value in an EOBR world. Additionally J.B. Hunt states that, in most over-the-road operations, driving time is the most important contributor to driver fatigue. For example, loading and unloading times can be significant, but supporting documents are of little value in determining the duration of on-duty activity. Siemens stated law enforcement is unlikely to accept reduced supporting documents over the long term, and inadequate performance standards lead States and law enforcement to ignore EOBRs.

One owner/operator said this proposed relief was an unfair advantage to motor carriers who could afford EOBRs.

Response: FMCSA agrees compliant EOBRs produce regular time and CMV location position histories sufficient to adequately verify a driver’s on-duty driving activities. Under this final rule, motor carriers voluntarily maintaining the time and location data produced by EOBRs would need to maintain only those additional supporting documents that are necessary to verify ODND activities and off-duty status.

It is not in the best interest of public safety to provide relief from supporting document requirements necessary to verify ODND status. Providing such relief could make verification and enforcement of ODND activities extremely difficult, if not impossible in some cases. For privacy reasons, the requirements for compliant EOBRs stop short of the electronic, video or other driver monitoring measures that would be necessary to verify individuals’ on-duty not driving time and activities through use of automated recorders.

FMCSA disagrees with FedEx that failure to eliminate all supporting document requirements is an indication that EOBR technology is not yet ready for implementation. FMCSA considers the ability to relieve supporting

document requirements related to on-duty and driving time significant in itself. Blanket relief from all supporting document requirements was not proposed in the NPRM and is not included as part of this final rule.

7.2.1 EOBRs and the Supporting Documents Rule

Several commenters raised the relationship of this rule with the supporting documents rule. ATA stated FMCSA should complete the supporting document rule as soon as possible. FedEx said the rule should be coordinated with the EOBR rule, OOIDA and CVSA asserted until the supporting document rule is complete, the public does not have enough information to evaluate the incentives.

FMCSA published the supporting documents Supplemental Notice of Proposed Rulemaking on November 3, 2004 (69 FR 63997), and proposed requirements for the collection and use of documents to verify the accuracy of driver records of duty status. It proposed language to clarify the duties of motor carriers and drivers with respect to supporting documents and requested further comments on the issue. FMCSA withdrew this rulemaking action on October 25, 2007 (72 FR 60614) based on issues with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520) analysis supporting this action. After the paperwork analysis that accurately identifies the information collection burden associated with the existing supporting documents requirements is complete, the Agency intends to initiate a new rulemaking action. This will ensure the new rulemaking proposal is based on an accurate and comprehensive understanding of the existing information collection inventory.

FMCSA does not wish to delay the benefits of this rulemaking pending completion of the supporting documents rule. Therefore, this rulemaking provides for relief from the existing supporting document requirements related to on-duty driving activities for motor carriers that voluntarily install EOBRs.

7.3 Suggestions for Other Incentives

MTA recommended any violations occurring when the truck is being used as a personal conveyance should be assigned only to the driver, not the carrier. It suggested carriers should not be subject to violations for speeding based on GPS data, and also that RODS violations should be weighted as other categories are, not at twice the value.

ATA suggested including positive credits or points for carriers in the

SafeStat selection criteria as applied to the safety management and Driver SEAs. ATA also suggested FMCSA offer relief from the 2-point assessment in the safety rating methodology for a pattern of HOS violations. It also recommended the use of random sampling in conducting compliance reviews. In the event these incentives cannot be achieved through provisions in regulations, FMCSA should provide motor carriers the ability to test and apply these incentives through pilot programs and an expedited exemption process.

ATA, TCA, J.B. Hunt, Fil-Mor Express, AMSA, and two individuals recommended tax incentives. Two individuals also recommended tax breaks. TCA stated log auditing for EOBR logs should be done only at roadside inspections, not by the carriers. DriverTech stated the fleets and EOBR manufacturers should be exempt from lawsuits on product and usage liability.

CTA recommended FMCSA consider allowing minor variances in driving, on-duty and off-duty time, up to a specified limit. CTA did not see this as an incentive to encourage EOBR use by compliant carriers; rather, it considered it to be a reasonable enforcement approach to avoid unwarranted penalties. Other commenters made similar suggestions.

J.B. Hunt suggested a number of incentives. It recommended providing EOBR carriers with a credit on their Inspection Selection System score to allow their drivers to more frequently bypass inspection stations. J.B. Hunt said this may help gain much needed driver acceptance. Only carriers with a good history of well maintained equipment (Equipment Safety Evaluation Area (SEA) value or Out-of-Service rates less than a certain score) should qualify for this incentive.

J.B. Hunt said the Agency should make a commitment in the final rule to work cooperatively with other agencies and governmental entities in an effort to exempt EOBR units from the Federal Excise Tax (FET) for original equipment manufacturer installations and equipment retrofitting and to provide for an accelerated depreciation or expensing option for tax purposes. It recommended ensuring EOBR carriers are able to gain the benefit of the “Intra-City Multiple Stop” rule by permitting the driver to show very short movements (totaling less than 1 percent of daily miles traveled) combined with other driving in the same city. This should also apply to consolidating ODND time as currently permitted when logging on paper.

AMSA stated, without sufficient incentives, HHG carriers would find it too expensive to install EOBRs and implement the supporting systems.

An individual suggested original equipment manufacturer-installed EOBRs should come with the option to switch providers.

Response: FMCSA believes the majority of other incentive ideas offered, including tax incentives, are outside the scope of this rulemaking. FMCSA does not believe it is in the best interest of public safety to count threshold rates of HOS violations the same as other violations in our safety fitness rating methodology, as suggested by the Minnesota Trucking Association and the ATA. To do so would effectively allow motor carriers to continue in operation with a Satisfactory safety fitness rating and 100 percent HOS noncompliance as long as deficiencies were not documented in other areas of the motor carrier's operation. Also, FMCSA did not propose, and will not require, EOBRs to collect vehicle speed data.

8. Economic Analysis and Other Rulemaking Analyses and Notices

8.1 Economic Costs

8.1.1 Viability of EOBR Market Without a Broad Mandate

Three commenters, Report on Board, Siemens, and CVSA, stated a broader mandate would lead to lower device costs. Report on Board claims it did not see a viable market for its own product without an industry-wide mandate. Siemens reported its device would cost 20 percent more under a long-haul mandate compared to what it would cost under an industry-wide mandate and mentioned that component costs should fall over time. However, IIHS pointed out there is already a market for these devices, and questions of unit-cost and availability are no longer relevant.

Response: FMCSA assumes that the price of EOBRs under an industry-wide mandate should be considered from a long-run equilibrium perspective—*i.e.*, assuming manufacturers have had enough time to enter the industry and expand capacity to meet demand. Under those conditions, prices should be driven to where they allow efficient manufacturers to cover their production costs and provide an adequate profit.

The production of more units may allow manufacturers to take advantage of economies of scale (whereby fixed costs are spread over more units) and produce EOBRs at lower per-unit cost. The degree to which economies of scale would reduce costs is uncertain, however. Current and would-be EOBR manufacturers would, for the most part,

already be able to take advantage of considerable economies of scope³ because they (1) Currently produce similar products, (2) already possess the necessary technical expertise, organizational infrastructure, distribution networks, and some of the necessary manufacturing equipment, and (3) have access to variable inputs (materials and labor). Independent of the number of EOBRs produced, firms would not necessarily need to make outlays for many of these fixed inputs. Similarly, though manufacturers might be expected to achieve manufacturing cost savings through “learning by doing” (that is, finding more efficient manufacturing methods as cumulative output increases), it is not clear to what extent learning effects have already been exhausted in the course of manufacturing very similar devices. Finally, uncertainty about the number of new manufacturers entering the expanded market makes it impossible to estimate the number of units per manufacturer, which is a key variable in determining both scale and learning effects.

FMCSA agrees that the cost of EOBRs' electronic components—EOBRs generally borrow components from existing technology—should trend down, assuming that plentiful supplies of electronic parts continue. However, and given the circumstances noted above, FMCSA does not have sufficient data at this time that would allow it to estimate the effects of greater production volumes on EOBR costs, and hence on EOBR prices. In the face of substantial uncertainty over the extent of any reduction in EOBR prices as a result of greater sales volumes, FMCSA has assumed that the market price for EOBRs would remain unchanged regardless of the breadth of the mandate, for the purposes of this rule. The data and price projections will be explored further in the follow-on rulemaking, discussed earlier.

The Agency agrees with IIHS that availability should not be a consideration and that EOBR prices are not prohibitive. Report on Board's claim that it did not see a viable market without FMCSA's delivering captive customers is not supported by current market conditions: Not only are numerous manufacturers already engaged in this business, but the market for these devices could extend beyond U.S. borders. In both the NPRM and this final rule, the Agency examined a variety of devices, including the lowest

cost device submitted for consideration. The analysis for the final rule is premised on the use of only a low cost device.

8.1.2 Alternative Device Cost Estimates

Report on Board, Siemens, NPGA, and TCA offered estimates of EOBR device costs ranging from \$300 to \$3,000. Siemens stated the low cost device considered in the NPRM would not be practicable due to its low operational life, and offered a \$300 price estimate for its own minimally compliant device, which it claims has a ten-year operational life with periodic maintenance and upgrades; the annualized cost of this device would be \$69.

Response: Since the NPRM was published, FMCSA has actively monitored EOBR technology (both devices with and without extra fleet management applications) currently being sold in North America. It conducted its analysis in that NPRM using a range of devices priced from \$100 to \$2000, a range into which most of the devices subsequently described by commenters fall. The Agency categorically rejects the assertion motor carriers will need to spend \$3000 for a device that meets the performance standards of this rule. FMCSA agrees the cost-savings of the low cost device originally considered was severely curtailed by its assumed short operational life. Since publishing the NPRM, the Agency has become aware of other compliant low cost EOBRs, and has focused its analysis on one of them, while carefully considering all of the costs particular to this device.

8.1.3 Comments on Associated Costs

Eight commenters mentioned costs associated with EOBRs in addition to the individual device costs. AMSA, SC&RA, Werner, the Maryland State Police, TCA, and ATA stated driver and other employee training expenses would be significant. Werner, AMSA, the Maryland State Police, and ATA mentioned installation costs. FedEx, SC&RA, ATA, TCA, and NPGA stated the Agency should consider administrative costs for such expenditures as computer software and hardware, data extraction, and administrative staff; NPGA further stated computing equipment to process EOBR data could cost as much as \$15,000 per carrier, and such expense would be disproportionately large for its members, who, on average, have 9 or fewer trucks. AMSA, SC&RA, Maryland State Police, and ATA commented inspection, maintenance, and repair

costs should be factored in. AMSA, SC&RA, and ATA stated airtime costs for data extraction should be accounted for, while Siemens stated a single annual operating cost figure it has estimated for its low-cost device includes all airtime costs.

Werner and ATA pointed to device calibration as possibly resulting in significant cost. Werner stated calibration requirements may impose significant costs on the carrier if calibration cannot be easily done by existing staff and asked how often calibration will or should be required. This could represent a substantial burden for many carriers that have trucks that are not based at a terminal. ATA also listed driver technical demands, external report generation, and the costs for some fleets of moving from existing systems to new systems as potentially adding costs.

Response: With the exception of calibration costs, which FMCSA does not believe to be significant, the Agency included all of the costs referenced by commenters. In any event, commenters for the most part did not offer any alternative cost figures for the Agency to consider. Regarding repair, maintenance, and upgrade costs, the Agency currently bases its estimates on a device that is leased from its manufacturer and does not have these costs associated with it. Cost and benefit estimates now explicitly account for current use of AOBRDs, devices that would meet the requirements of this rule, and fleet management systems that can be upgraded to EOBR functionality.

The Agency does not believe NPGA's assertion that office computer equipment for processing EOBR data “could be as much as \$15,000” is reasonable, particularly for its members, who, on average, have nine or fewer trucks. The Agency has made every attempt not to underestimate any costs, although all cost estimates are constrained by the criterion that EOBR systems meet the minimum requirements of this rule. In addition, hypothetically large cost figures are not germane, because carriers incur excessive costs at their own choosing, not because the rule requires them to do so. Costs of office equipment have been eliminated in this analysis because the EOBR provider hosts all records on a secure Web site and includes the price of this service in its monthly fee.

Every device is configured differently, and not all devices share the same costs. The complexity and cost of installation, for example, can vary widely by device, and the costs of even similarly configured devices can differ greatly. FMCSA presented the costs particular to

³Economies of scope: Per-unit or average total cost of production decreases as a result of increasing the number of different goods produced.

the three devices it considered; it could not present costs as if these had been any other devices. Likewise, the current analysis focuses on the actual costs of implementing the low cost device presented. As in the NPRM, costs particular to that device are explicitly accounted for. The goal of the cost analysis is to demonstrate how the performance standards of this rule may be met with minimal cost, not to estimate the costs of every possible device.

8.1.4 Costs of Training Law Enforcement

The Maryland SHA and ATA stated the cost of training enforcement officers to review electronic logs should be included. The Maryland SHA added State enforcement officials would also be asked to provide “inspection services for verification of electronic-on-board-recorder installation and operation,” although enforcement personnel are neither trained electronics installers nor mechanics. The Maryland SHA also stated not all enforcement personnel have laptop computers in their patrol vehicles, and those that do may not have wireless connectivity; it would be impossible to check electronic logs under these circumstances. Additionally enforcement personnel should not be asked to perform this function as staffing reserves are already strained with more important duties—*e.g.*, roadside inspections, homeland security activities, *etc.* Maryland SHA stated FMCSA should fully assess the effects on enforcement. No funding is being provided to enforce the new provisions.

Response: The Agency has carefully considered the costs to State enforcement staff. The Agency has already increased its cost estimates after recognizing that training in reviewing electronic records will always represent an additional cost, and will never simply replace the current training in paper RODS. In response to the Maryland SHA’s concerns, the Agency has estimated costs of inspecting EOBR devices, and the costs of equipment purchases and upgrades for accessing and reviewing electronic records.

8.2 Paperwork Savings

Six entities commented on paperwork benefits and driver’s time use. PMAA stated the time saved from not filling out logs is not significant. However, the Maryland SHA agrees that EOBRs will save time, and SC&RA stated automation should reduce administrative burden. Report on Board estimated annual per truck paperwork burden costs \$2,029. Public Citizen commented electronic records are more

easily collected and analyzed, and such information could be used to more accurately track and monetize time wasted at loading docks, which would benefit drivers paid by the mile or trip. Verigo, a manufacturer of manual electronic logs that lack the automatic recording features required of AOBRDs and EOBRs, stated FMCSA is relatively silent on the issue of HOS auditing and management reporting.

Response: Paperwork savings figure prominently into this rule’s analysis, and have been carefully considered. The paperwork burden associated with RODS includes the time spent filling them out, reviewing them, and filing them. FMCSA’s estimate of the paperwork burden of filling out RODS is 6.5 minutes per day per driver, and 3 minutes per day per driver for review and filing. Trucking companies may not recognize all the benefits of paperwork savings if they pay drivers by the mile or trip and do not compensate drivers for time spent filling out logs. Costs directly borne by drivers are as important as costs borne by motor carriers, and, as other commenters have pointed out and the RIA shows, the time saving to drivers can be significant. The Agency also agrees with Public Citizen that insofar as EOBRs accurately capture total on-duty time, drivers may benefit when wasted time, such as excessive time spent at loading docks, is documented. Nevertheless, this potential benefit is not included in the RIA because the Agency cannot predict if this added recording of on duty time will translate into driver compensation, and if so, whether this would be a transfer from motor carriers or paid for via higher prices charged to shippers.

8.3 Regulatory Flexibility Act Analysis (Small Entities)

Forty commenters, including 15 carriers and 13 drivers, expressed opinions on the impact on small entities. PMAA stated the cost would be a heavy burden for small companies. TCA stated with high fuel costs and expected tighter emission controls increasing the costs of new trucks, the cost of EOBRs is one more burden the majority of these carriers cannot afford. The Maryland State Police said mandating EOBRs could be economically disastrous for some carriers. OOIDA said the burden would be disproportionately borne by small entities, which do not have the purchasing power of larger carriers or the large number of revenue producing drivers across whom to spread EOBR costs; non-safety economic advantages of EOBRs also come at a cost and typically are only useful to those

managing large fleets. OOIDA also stated small carriers are more likely to be selected for reviews, although until SafeStat is revised, it is difficult to be certain on that point; larger carriers are more sophisticated about disguising noncompliance.

OOIDA also commented the most burdensome cost to small-business carriers will be the loss of drivers who are unwilling to drive for an EOBR-mandated motor carrier. As posited by OOIDA, for example, the cost of the initial installation of an EOBR into an existing truck has been estimated to be between \$1,000 and \$3,000. Either the motor carriers will face that cost for each truck, or the owner-operator will bear that cost. That cost may be prohibitive for a small-business, and owner-operators who face such a cost will quickly look for work for another carrier. Under either scenario, a motor carrier facing the mandate will go out of business.

Response: All carriers are harmed, but especially small carriers, by companies that gain a competitive advantage by violating safety regulations. Although the majority of carriers are small businesses, most will not be subject to the remedial directive. Any competitive advantage gained by a small carrier by violating HOS will likely come at the expense of carriers with similar characteristics—size, geography, market share.

Regarding comments concerning costs, costs for the most part are proportional to the number of power units a carrier would need to outfit. Carriers would incur an annual net expense of less than \$100 per power unit, less than 0.1 percent of annual revenue per power unit. Furthermore, even these modest costs are avoidable as long as carriers comply with the HOS rules.

8.4 Comments on Driver Health Considerations

Three commenters criticized the Agency for failing to adequately consider driver health impacts in this rule. IBT stated carriers will use EOBRs to pressure drivers to increase productivity, which would increase their stress levels and adversely impact their health, and OOIDA stated the stress of being monitored alone is enough to harm driver health. Advocates, however, stated FMCSA’s concern about the stress of using EOBRs distorted the research results of several studies, and the Agency had ignored potential health impacts of using EOBRs and improving compliance. Advocates contended the Agency’s regulatory analysis ignored “evidence of adverse

health impacts from the very long working hours associated with HOS violations." Furthermore, by not proposing to mandate EOBR use, Advocates held the Agency was not helping "to ameliorate the adverse health impacts of exceptionally long working and driving hours triggered by the Agency's final rules in 2003 and in 2005."

Response: The Agency has addressed both positive and negative health impacts in Appendix A to the EA for this rule, which has been placed in the docket. The Agency carefully reviewed research on the potentially negative impacts of electronic monitoring and concluded that the use of EOBRs required in today's final rule will not result in negative impacts on driver health for two reasons: First, because monitoring of HOS compliance is an existing, not a new, requirement; and second, because the Agency is requiring EOBRs to monitor safety, not workplace productivity.

The Agency has also not been able to statistically quantify significant health benefits from improved HOS compliance, although at least some benefits are anticipated to result, for at least some drivers. Cost and benefit estimates of the HOS regulations are included in the analysis for that separate rulemaking 72 FR 71247 (Dec. 17, 2007). In addition, the underlying HOS regulations are the subject of a separate rulemaking action 72 FR 71247 (Dec. 17, 2007).

V. Rulemaking Analyses and Notices

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

Under Executive Order 12866 (58 FR 51735, October 4, 1993) and DOT policies and procedures, FMCSA must determine whether a regulatory action is "significant," and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the

environment, public health or safety, or State, local, or Tribal government or communities.

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency.

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof.

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

FMCSA has determined this rule will have an annual effect of \$100 million or more, and is, therefore, an economically significant regulatory action within the meaning of the Executive Order and under the regulatory policies and procedures of DOT because of the level of public interest in rulemakings related to hours-of-service (HOS) compliance. The Agency has therefore conducted an RIA of the costs and benefits of this rule. The RIA is summarized below. The full analysis is available in the docket.

After reconsidering the discussion in the NPRM, and based on comments received, FMCSA examined two regulatory options for the final rule—the 2 x 10 remedial directive proposed in the NPRM, and the considerably broader and more stringent 1 x 10 remedial directive. We understand the concerns of ATA and J.B. Hunt, among others, who believe the proposal did not cover enough carriers. While FMCSA acknowledges the safety concerns of those that support an industry-wide EOBR mandate, the Agency cannot extend the EOBR mandate in that manner in this final rule because the scope of the current rulemaking proceeding is limited to a compliance-based regulatory approach, implemented through a remedial directive. However, the number of motor carriers that will be required to install, use and maintain EOBRs is significantly greater under this final rule—using the 1 x 10 trigger—than under the 2 x 10 trigger that was proposed in the NPRM. The RIA examines the costs and benefits of two regulatory options, the 2 x 10 and the 1 x 10 remedial directives.

Cost information was gathered from publicly available marketing materials and contact with EOBR vendors. The

RIA focuses on the least expensive device determined to be compliant with the rule.⁴ We do not expect all carriers to use this specific device, only that it represents a device at the low end of the cost range of an EOBR that the Agency believes would be compliant with the provisions of the final rule.

For many carriers, this rule would not require new equipment. Some carriers already use AOBRDs, AOBRDs with enhanced functionality, or onboard systems with EOBR functionality, which the rule will allow them to continue using provided certain conditions are met. These carriers are excluded from cost and benefit calculations when appropriate. Other carriers employ Fleet Management Systems (FMS) that are capable of fulfilling this rule's requirements with the activation of available hardware or software functions. Estimates of costs are lower for carriers that already have partial or complete EOBR functionality.

Costs were estimated on an annualized basis over a ten-year horizon. Costs and benefits that accrue throughout the year are presented at their present value at the beginning of the year. Training time costs for drivers, administrative staff, and State enforcement personnel were estimated. The analysis estimates the cost to carriers of coming into compliance with HOS and corresponding safety benefits as induced through EOBR use. Cost savings on paper log purchase, use, and processing are also assessed.

Safety benefits of EOBR use are assessed by estimating reductions in HOS violations and resulting reductions in fatigue-related crashes. Other non-safety health effects (positive and negative) for drivers, as a result of the potential decreased driving time based on increased pressure on drivers to comply with the HOS regulations, are considered but not quantified in this analysis.

The estimates of the total net benefits are presented below: Of the two regulatory options, the 1 x 10 remedial directive yields higher total net benefit.

⁴ The least expensive device that satisfies the requirements of the rule was found to be the RouteTracker sold by Turnpike Global. Cost data are based on the use of this device with the Sprint network.

TOTAL ANNUAL NET BENEFITS [Millions]	Regulatory option 1: 1 x 10 remedial directive	Regulatory option 2: 2 x 10 remedial directive
Total Costs	(\$139) 182	(\$14) 22
Total Benefits		
Net Benefits	43	8

Additionally, the overall crash rates of both the 1 x 10 remedial directive motor carriers and the 2 x 10 remedial directive motor carriers are considerably higher than the crash rates of the general motor carrier population. Using data from MCMIS and compliance review databases, crash rates were computed by dividing total crashes by each carrier's number of power units. The Agency compared crash rates between the general motor carrier population and 1 x 10 remedial directive motor carriers as well as between the general motor carrier population and 2 x 10 remedial directive motor carriers. The 1 x 10 remedial directive motor carriers were found to have a 40 percent higher crash rate than that of other carriers that have undergone compliance reviews, and 2 x 10 remedial directive motor carriers had a 90 percent higher crash rate than that of other carriers that have undergone compliance reviews. The final rule's application of a remedial directive to the 1 x 10 remedial directive motor carriers makes the best use of Agency resources and provides considerably higher net benefits to society.

Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (Pub. L. 96-354, 5 U.S.C. 601 *et seq.*), requires agencies to consider the impact of regulations on small businesses, small non-profit organizations, and small governmental jurisdictions, unless the Agency determines that a rule is not expected to have a significant economic impact on a substantial number of small entities (SEISNOSE). The remedial directive aspect of this rule will be applicable to about 2,800 motor carriers in the first year and 5,700 motor carriers each year thereafter. The Agency estimates that the total net cost of this rule will be less than \$100 per power unit per year, compared to revenues of over \$100,000 per power unit per year. Based on the number of carriers affected and the overall cost impact to these carriers, the Agency does not expect this rule to have a SEISNOSE. The Agency has prepared a small business impact analysis for this rule that discusses its estimates of small business impacts.

This analysis has been placed in the docket.

Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501 *et seq.*), Federal agencies must obtain approval from OMB for each collection of information they conduct, sponsor, or require through regulations. The FMCSA determined that this rule will affect the OMB Control Number 2126-0001, "Hours of Service of Drivers Regulation, Supporting Documents," information collection request (ICR), approved at 184,380,000 burden hours through December 31, 2011. The PRA requires agencies to provide a specific, objectively supported estimate of burden hours that will be imposed by the information collection. *See* 5 CFR 1320.8. The requirement triggering the paperwork burden imposed by FMCSA's records of duty status requirement is set forth at 49 CFR 395.8.

The FMCSA estimated that the remedial provisions of this final rule, requiring the installation, use, and maintenance of EOBRs by motor carriers with a threshold rate of serious HOS violations, would affect approximately 5,700 motor carriers that employ 129,000 drivers annually. The use of EOBRs will reduce the annual burden hours for FMCSA's information collection OMB Control Number 2126-0001 by 3,110,000 hours. The FMCSA's revised estimate of the annual burden of the IC is 181,270,000 hours (184,380,000 – 3,110,000).

A supporting statement reflecting this assessment will be submitted to OMB together with this final rule.

Privacy Impact Assessment

Section 522(a)(5) of the Transportation, Treasury, Independent Agencies, and General Government Appropriations Act, 2005, (Pub. L. 108-447, div. H, 118 Stat. 2809, 3268) requires the Department of Transportation and certain other Federal agencies to conduct a privacy impact assessment (PIA) of each proposed rule that will affect the privacy of individuals. The Agency conducted a

PIA for the NPRM, and we have augmented the PIA for this final rule and placed the revised version in the docket. Although the Agency determined that the same personally identifiable information (PII) for CMV drivers currently collected as part of the RODS and supporting documents requirements would continue to be collected under this rulemaking, it recognized the significance of the decision to require, even in limited circumstances, that PII previously kept in paper copy now be kept electronically. Privacy was a significant consideration in FMCSA's development of this proposal. As stated earlier, we recognize that the need for a verifiable EOBR audit trail—a detailed set of records to verify time and physical location data for a particular CMV—must be counterbalanced by privacy considerations. The Agency considered, but rejected, certain alternative technologies to monitor drivers' HOS (including in-cab video cameras and bio-monitors) as too invasive of personal privacy. All CMV drivers subject to 49 CFR part 395 must have their HOS accounted for to ensure they have adequate opportunities for rest. This final rule would not change the Agency's policies, practices, or regulations regarding its own collection and storage of HOS records of individual drivers whose RODS are reviewed. The expanded review procedures under the random review incentive, however, would enlarge the population of drivers whose RODS are reviewed for those carriers. It would also change the technology by which compliance is to be documented, in a way that facilitates both the sharing of information and its capacity to be data processed.

As before, the HOS information recorded on EOBRs would be accessible to Federal and State enforcement personnel only when compliance assurance activities are conducted at the facilities of motor carriers subject to the RODS requirement or when the CMVs of those carriers are inspected at roadside. Motor carriers would not be required to upload this information into Federal or

State information systems accessible to the public. This would aid data security and ensure that general EOBR data collection does not result in a new or revised Privacy Act System of Records for FMCSA. (Evidence of violation of any FMCSA requirements uncovered during either of these activities is transferred to a DOT/FMCSA Privacy Act record system.) Data accuracy concerning drivers' RODS should improve as a result of the new performance standards for EOBRs, allowing drivers to make EOBR entries to identify any errors or inconsistencies in the data, and mandating EOBR use by motor carriers with a history of serious HOS noncompliance.

What would change, and change significantly, is the capacity of this data to be processed and converted to more usable information for the purpose of determining drivers' and motor carriers' compliance with the HOS regulations. Although no CMV operator would be required to upload this data to a Federal or State database accessible to the public, the electronic formulation of the data would make it easier for a CMV operator to keep track of the activities of its drivers. Similarly, Federal and State law enforcement and safety authorities, including FMCSA, would be better able to do the same. As shown in other contexts, the increased accessibility, accuracy, and reliability of geospatial location information has made electronically generated and preserved data attractive to a variety of audiences. On balance, we must compel use of these devices in those situations described in this rule. The entire privacy impact assessment is available in the docket for this rule.

Unfunded Mandates Reform Act

This rule would not result in the net expenditure by State, local and Tribal governments, in the aggregate, or by the private sector, of \$141,300,000 or more in any one year, nor would it affect small governments. Therefore, no actions are deemed necessary under the provisions of the Unfunded Mandates Reform Act of 1995.

Executive Order 13132 (Federalism)

This rulemaking would not preempt or modify any provision of State law, impose substantial direct unreimbursed compliance costs on any State, or diminish the power of any State to enforce its own laws. Accordingly, this rulemaking does not have Federalism implications warranting the application of Executive Order 13132.

Executive Order 12372 (Intergovernmental Review)

The regulations implementing E.O. 12372 regarding intergovernmental consultation on Federal programs and activities do not apply to this rule.

National Environmental Policy Act

The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 *et seq.*, as amended) requires Federal agencies to consider the consequences of, and prepare a detailed statement on, all major Federal actions significantly affecting the quality of the human environment. In accordance with its procedures for implementing NEPA (FMCSA Order 5610.1, Chapter 2.D.4(c) and Appendix 3), FMCSA prepared an EA to review the potential impacts of this rulemaking. The EA findings are summarized below. The full EA is in the docket.

Implementation of this action would alter to some extent the operation of CMVs. However, the rule will not require any new construction or change significantly the number of CMVs in operation. FMCSA found, therefore, that noise, hazardous materials, endangered species, cultural resources protected under the National Historic Preservation Act, wetlands, and resources protected under Section 4(f) of the Department of Transportation Act would not be impacted by the rule.

The EA also examined impacts on air quality and public safety. We anticipate that drivers of CMVs operated by carriers that have been issued an EOBR remedial directive will now take the full off-duty periods required by the HOS rules. During off-duty periods, drivers frequently leave the CMV parked in "idle," which increases engine emissions on a per-mile basis. Hence, drivers for remediated carriers will cause a modest overall increase in engine emissions by virtue of additional drivers coming into compliance with the HOS regulations. Because the number of trucks likely to be required to install EOBRs is relatively small (139,000 out of 4.2 million total CMVs), FMCSA determined that the increase in air toxics would be negligible. Moreover, because drivers for carriers brought into HOS compliance will experience less fatigue and be less likely to have fatigue-related crashes, there will be a counterbalancing increase in public safety.

FMCSA concludes that the rule changes will have a negligible impact on the environment. The provisions under the action do not, individually or collectively, pose any significant environmental impact. Therefore, this

rule change will not require an environmental impact statement. Consequently, FMCSA issues a Finding of No Significant Impact (FONSI) in the EA for this final rule.

Executive Order 13211 (Energy Supply, Distribution or Use)

FMCSA determined that the rule will not significantly affect energy supply, distribution, or use. No Statement of Energy Effects is therefore required.

Executive Order 12898 (Environmental Justice)

FMCSA considered the effects of this final rule in accordance with Executive Order 12898 and DOT Order 5610.2 on addressing Environmental Justice for Minority Populations and Low-Income Populations, published April 15, 1997 (62 FR 18377) and determined that there are no environmental justice issues associated with this rule or any collective environmental impact resulting from its promulgation. Environmental justice issues would be raised if there were "disproportionate" and "high and adverse impact" on minority or low-income populations. None of the regulatory options considered in this rulemaking will result in high and adverse environmental impacts.

Executive Order 13045 (Protection of Children)

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885, Apr. 23, 1997), requires agencies issuing "economically significant" rules, if the regulation also concerns an environmental health or safety risk that an agency has reason to believe may disproportionately affect children, to include an evaluation of the regulation's environmental health and safety effects on children. Although the rule is economically significant, it will improve safety; the rule also would not have a disproportionate affect on children. Therefore, FMCSA has determined that an analysis of the impacts on children is not required.

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.

Executive Order 12630 (Taking of Private Property)

This rule will not effect a taking of private property or otherwise have

taking implications under E. O. 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

National Technology Transfer and Advancement Act

The National Technology Transfer and Advancement Act (15 U.S.C. 272 note) requires Federal agencies proposing to adopt Government technical standards to consider whether voluntary consensus standards are available. If the Agency chooses to adopt its own standards in place of existing voluntary consensus standards, it must explain its decision in a separate statement to OMB.

FMCSA determined there are no voluntary national consensus standards for the design of EOBRs as complete units. However, there are many voluntary consensus standards concerning communications and information interchange methods that could be referenced as part of comprehensive performance-based requirements for EOBRs to ensure their reliable and consistent utilization by motor carriers and motor carrier safety compliance assurance officials. For example, the digital character set would reference the ASCII (American Standard Code for Information Interchange) character set specifications, the most widely used form of which is ANSI X3.4-1986. This is described in the “American National Standard for Information Systems—Coded Character Sets—7-Bit American National Standard Code for Information Interchange (7-Bit ASCII) (ANSI document # ANSI INCITS 4-1986 (R2007)) published by the American National Standards Institute (ANSI). The standard is available by contacting the American National Standards Institute, 11 West 42nd Street, New York, New York 10036, or by visiting the ANSI Web site at <http://webstore.ansi.org>. In another example, the Agency would reference the 802.11g-2003 standard as defined in the 802.11-2007 base standard for wireless communication published by IEEE (Institute of Electrical and Electronics Engineers).

We did review and evaluate the European Commission Council Regulations 3821/85 (analog tachograph) and 2135/98 (digital tachograph). These are not voluntary standards, but rather are design-specific type-certification programs. We concluded these standards lack several features and functions (such as CMV location tracking and the ability for the driver to enter remarks) that FMCSA has included in its performance-based final

rule, and require other features (such as an integrated license document on the driver's data card) that are not appropriate for U.S. operational practices.

List of Subjects

49 CFR Part 350

Grant programs—transportation, Highway safety, Motor carriers, Motor vehicle safety, Reporting and recordkeeping requirements.

49 CFR Part 385

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

49 CFR Part 395

Highway safety, Incorporation by reference, Motor carriers, Reporting and recordkeeping.

49 CFR Part 396

Highways and roads, Motor carriers, Motor vehicle equipment, Motor vehicle safety.

■ For the reasons stated in the preamble, FMCSA amends 49 CFR chapter III as set forth below:

PART 350—COMMERCIAL MOTOR CARRIER SAFETY ASSISTANCE PROGRAM

■ 1. The authority citation for part 350 is revised to read as follows:

Authority: 49 U.S.C. 13902, 31101–31104, 31108, 31136, 31140–31141, 31161, 31310–31311, 31502; and 49 CFR 1.73.

■ 2. Amend § 350.201 by revising the introductory text and adding a new paragraph (z) to read as follows:

§ 350.201 What conditions must a State meet to qualify for Basic Program Funds?

Each State must meet the following 26 conditions:

* * * * *

(z) Enforce requirements relating to FMCSA remedial directives issued in accordance with 49 CFR part 385, subpart J, including providing inspection services for verification of electronic on-board recorder installation and operation as provided in § 385.811(b).

PART 385—SAFETY FITNESS PROCEDURES

■ 3. Revise the authority citation for part 385 to read as follows:

Authority: 49 U.S.C. 113, 504, 521(b), 5105(e), 5109, 13901–13905, 31133, 31135, 31136, 31137(a), 31144, 31148, and 31502; Sec. 113(a), Pub. L. 103–311; Sec. 408, Pub. L. 104–88; Sec. 350, Pub. L. 107–87; and 49 CFR 1.73.

■ 4. Amend § 385.1 by revising paragraph (a) to read as follows:

§ 385.1 Purpose and scope.

(a) This part establishes FMCSA's procedures to determine the safety fitness of motor carriers, to assign safety ratings, to direct motor carriers to take remedial action when required, and to prohibit motor carriers determined to be unfit from operating a CMV.

* * * * *

■ 5. Amend § 385.3 by adding a definition for the term “safety fitness determination” in alphabetical order, by removing the existing definition for the term “safety ratings,” and by adding a new definition for the term “safety rating or rating” to read as follows:

§ 385.3 Definitions and acronyms.

* * * * *

Safety fitness determination means the final determination by FMCSA that a motor carrier meets the safety fitness standard under § 385.5.

Safety rating or rating means a rating of “Satisfactory,” “Conditional” or “Unsatisfactory,” which the FMCSA assigns to a motor carrier using the factors prescribed in § 385.7, as computed under the Safety Fitness Rating Methodology (SFRM) set forth in Appendix B to this part and based on the carrier's demonstration of adequate safety management controls under § 385.5(a). A safety rating of “Satisfactory” or “Conditional” is necessary, but not sufficient, to meet the overall safety fitness standard under § 385.5.

(1) *Satisfactory safety rating* means that a motor carrier has in place and functioning safety management controls adequate to meet that portion of the safety fitness standard prescribed in § 385.5(a). Safety management controls are adequate for this purpose if they are appropriate for the size and type of operation of the particular motor carrier.

(2) *Conditional safety rating* means a motor carrier does not have adequate safety management controls in place to ensure compliance with that portion of the safety fitness standard prescribed in § 385.5(a), which could result in occurrences listed in § 385.5(a)(1) through (a)(11).

(3) *Unsatisfactory safety rating* means a motor carrier does not have adequate safety management controls in place to ensure compliance with that portion of the safety fitness standard prescribed in § 385.5(a), and this has resulted in occurrences listed in § 385.5(a)(1) through (a)(11).

(4) *Unrated carrier* means that the FMCSA has not assigned a safety rating to the motor carrier.

■ 6. Revise § 385.5 to read as follows:

§ 385.5 Safety fitness standard.

A motor carrier must meet the safety fitness standard set forth in this section. Intrastate motor carriers subject to the hazardous materials safety permit requirements of subpart E of this part must meet the equivalent State requirements. To meet the safety fitness standard, the motor carrier must demonstrate the following:

(a) It has adequate safety management controls in place, which function effectively to ensure acceptable compliance with applicable safety requirements to reduce the risk associated with:

(1) Commercial driver's license standard violations (part 383 of this chapter),

(2) Inadequate levels of financial responsibility (part 387 of this chapter),

(3) The use of unqualified drivers (part 391 of this chapter),

(4) Improper use and driving of motor vehicles (part 392 of this chapter),

(5) Unsafe vehicles operating on the highways (part 393 of this chapter),

(6) Failure to maintain accident registers and copies of accident reports (part 390 of this chapter),

(7) The use of fatigued drivers (part 395 of this chapter),

(8) Inadequate inspection, repair, and maintenance of vehicles (part 396 of this chapter),

(9) Transportation of hazardous materials, driving and parking rule violations (part 397 of this chapter),

(10) Violation of hazardous materials regulations (parts 170 through 177 of this title), and

(11) Motor vehicle accidents, as defined in § 390.5 of this chapter, and hazardous materials incidents.

(b) The motor carrier has complied with all requirements contained in any remedial directive issued under subpart J of this part.

■ 7. Amend § 385.9 by revising paragraph (a) to read as follows:

§ 385.9 Determination of a safety rating.

(a) Following a compliance review of a motor carrier operation, FMCSA, using the factors prescribed in § 385.7 as computed under the Safety Fitness Rating Methodology set forth in Appendix B to this part, shall determine whether the present operations of the motor carrier are consistent with that portion of the safety fitness standard set forth in § 385.5(a), and assign a safety rating accordingly.

* * * * *

■ 8. Amend § 385.11 by revising the section heading and adding paragraph (g) to read as follows:

§ 385.11 Notification of safety rating and safety fitness determination.

* * * * *

(g) If a motor carrier is subject to a remedial directive and proposed determination of unfitness under subpart J of this part, the notice of remedial directive will constitute the notice of safety fitness determination. If FMCSA has not issued a notice of remedial directive and proposed determination of unfitness under subpart J of this part, a notice of a proposed or final safety rating will constitute the notice of safety fitness determination.

■ 9. Amend § 385.13 by adding paragraph (e) as follows:

§ 385.13 Unsatisfactory rated motor carriers; prohibition on transportation; ineligibility for Federal contracts.

* * * * *

(e) *Revocation of operating authority.* If a proposed "unsatisfactory" safety rating or a proposed determination of unfitness becomes final, the FMCSA will, following notice, issue an order revoking the operating authority of the owner or operator. For purposes of this section, the term "operating authority" means the registration required under 49 U.S.C. 13902 and § 392.9a of this subchapter. Any motor carrier that operates CMVs after revocation of its operating authority will be subject to the penalty provisions listed in 49 U.S.C. 14901.

■ 10. Amend § 385.15 by revising paragraph (a) to read as follows:

§ 385.15 Administrative review.

(a) A motor carrier may request the FMCSA to conduct an administrative review if it believes FMCSA has committed an error in assigning its proposed safety rating in accordance with § 385.11(c) or its final safety rating in accordance with § 385.11(b).

* * * * *

■ 11. Amend § 385.17 by adding paragraphs (k) and (l) to read as follows:

§ 385.17 Change to safety rating based upon corrective actions.

* * * * *

(k) An upgraded safety rating based upon corrective action under this section will have no effect on an otherwise applicable notice of remedial directive, or proposed determination of unfitness issued in accordance with subpart J of this part.

(l) A motor carrier may not request a rescission of a determination of unfitness issued under subpart J of this part based on corrective action.

■ 12. Amend § 385.19 by revising paragraphs (a) and (b) to read as follows:

§ 385.19 Safety fitness information.

(a) Final safety ratings, remedial directives, and safety fitness determinations will be made available to other Federal and State agencies in writing, telephonically, or by remote computer access.

(b) The final safety rating, any applicable remedial directive(s), and the safety fitness determination pertaining to a motor carrier will be made available to the public upon request. Any person requesting information under this paragraph must provide FMCSA with the motor carrier's name, principal office address, and, if known, the USDOT Number or the Interstate Commerce Commission MC (ICCMC) docket number if any.

* * * * *

■ 13. Amend § 385.407 by revising paragraph (a) to read as follows:

§ 385.407 What conditions must a motor carrier satisfy for FMCSA to issue a safety permit?

(a) *Motor carrier safety performance.*

(1) The motor carrier:

(i) Must be in compliance with any remedial directive issued under subpart J of this part, and

(ii) Must have a "Satisfactory" safety rating assigned by either FMCSA, under the Safety Fitness Procedures of this part, or the State in which the motor carrier has its principal place of business, if the State has adopted and implemented safety fitness procedures that are equivalent to the procedures in subpart A of this part.

(2) FMCSA will not issue a safety permit to a motor carrier that:

(i) Does not certify that it has a satisfactory security program as required in § 385.407(b);

(ii) Has a crash rate in the top 30 percent of the national average as indicated in FMCSA Motor Carrier Management Information System (MCMIS); or

(iii) Has a driver, vehicle, hazardous materials, or total out-of-service rate in the top 30 percent of the national average as indicated in the MCMIS.

* * * * *

■ 14. Amend part 385 by adding a new subpart J consisting of new §§ 385.801 through 385.819 to read as follows:

Subpart J—Remedial Directives

Sec.

385.801 Purpose and scope.

385.803 Definitions and acronyms.

385.805 Events triggering issuance of remedial directive and proposed determination of unfitness.

385.807 Notice and issuance of remedial directive.

385.809 [Reserved]

385.811 Proof of compliance with remedial directive.
 385.813 Issuance and conditional rescission of proposed unfitness determination.
 385.815 Exemption for AOBRD users.
 385.817 Administrative review.
 385.819 Effective of failure to comply with remedial directive.

Subpart J—Remedial Directives

§ 385.801 Purpose and scope.

(a) This subpart establishes procedures for FMCSA's issuance of notices of remedial directives and proposed determinations of unfitness.
 (b) This subpart establishes the circumstances under which FMCSA will direct motor carriers (including owner-operators leased to motor carriers, regardless of whether the owner-operator has separate operating authority under part 365), in accordance with § 385.1(a), to install electronic on-board recorders (EOBRs) in their commercial motor vehicles as a remedy for threshold rate violations, as defined by § 385.803, of the part 395 hours-of-service regulations listed in Appendix C to this part.
 (c) This subpart establishes the procedures by which motor carriers may challenge FMCSA's issuance of proposed determinations of unfitness and remedial directives.
 (d) The provisions of this subpart apply to all motor carriers subject to the requirements of part 395 of this chapter.

§ 385.803 Definitions and acronyms.

(a) The definitions in subpart A of this part and part 390 of this chapter apply to this subpart, except where otherwise specifically noted.

(b) As used in this subpart, the following terms have the meaning specified:

Appendix C regulation means any of the regulations listed in Appendix C to Part 385 of this chapter.

Appendix C violation means a violation of any of the regulations listed in Appendix C to part 385 of this chapter.

Electronic on-board recording device (EOBR) means an electronic device that is capable of recording a driver's duty hours of service and duty status accurately and automatically and that meets the requirements of § 395.16 of this chapter.

Final determination for purposes of part 385, subpart J means:

(1) An adjudication under this subpart upholding a notice of remedial directive and proposed unfitness determination;
 (2) The expiration of the period for filing a request for administrative review of remedial directive and

proposed unfitness determination under this subpart; or
 (3) The entry of a settlement agreement stipulating that the carrier is subject to mandatory EOBR installation, use, and maintenance requirements.

Motor carrier includes owner-operators leased to carriers subject to a remedial directive, regardless of whether the owner-operator has separate operating authority under part 365 of this chapter.

Proposed determination of unfitness or *proposed unfitness determination* means a determination by FMCSA that a motor carrier will not meet the safety fitness standard under § 385.5 on a specified future date unless the carrier takes the actions necessary to comply with the terms of a remedial directive issued under this subpart.

Remedial directive means a mandatory instruction from FMCSA to take one or more specified action(s) as a condition of demonstrating safety fitness under 49 U.S.C. 31144(b).

Threshold rate violation for the purposes of this subpart means a violation rate for any Appendix C regulation equal to or greater than 10 percent of the number of records reviewed.

§ 385.805 Events triggering issuance of remedial directive and proposed determination of unfitness.

A motor carrier subject to 49 CFR part 395 will be subject to a remedial directive and proposed unfitness determination in accordance with this subpart for threshold rate violations of any Appendix C regulation or regulations that have been documented during a compliance review. A remedial directive and proposed unfitness determination will be issued if a compliance review conducted on the motor carrier resulted in a final determination of one or more threshold rate violations of any Appendix C regulation are discovered.

§ 385.807 Notice and issuance of remedial directive.

(a) Following the close of the compliance review described in § 385.805(a), FMCSA will issue the motor carrier a written notice of remedial directive and proposed determination of unfitness. FMCSA will issue the notice and proposed determination as soon as practicable, but not later than 30 days after the close of the review.

(b) The remedial directive will state that the motor carrier is required to install and maintain EOBRs compliant with § 395.16 of this chapter in all of the motor carrier's CMVs and to use the

EOBRs to record its drivers' hours of service pursuant to § 395.16. The motor carrier shall provide proof of the installation to FMCSA in accordance with § 385.811 within the following time periods:

(1) Motor carriers transporting hazardous materials in quantities requiring placarding, and motor carriers transporting passengers in a CMV, must install EOBRs and provide proof of the installation by the 45th day after the date of the notice of remedial directive.

(2) All other motor carriers must install EOBRs and provide proof of installation by the 60th day after the date of FMCSA's notice of remedial directive. If FMCSA determines the motor carrier is making a good-faith effort to comply with the terms of the remedial directive, FMCSA may allow the motor carrier to operate for up to 60 additional days.

(3) A motor carrier may challenge the notice of remedial directive and proposed determination of unfitness in accordance with § 385.817.

§ 385.809 [Reserved]

§ 385.811 Proof of compliance with remedial directive.

(a) Motor carriers subject to a remedial directive to install EOBRs under this section must provide proof of EOBR installation by one of the following:

(1) Submitting all of the carrier's CMVs for visual and functional inspection by FMCSA or qualified State enforcement personnel.

(2) Transmitting to the FMCSA service center for the geographic area where the carrier maintains its principal place of business all of the following documentation:

(i) Receipts for all necessary EOBR purchases.

(ii) Receipts for the installation work.

(iii) Digital or other photographic evidence depicting the installed devices in the carrier's CMVs.

(iv) Documentation of the EOBR serial number for the specific device corresponding to each CMV in which the device has been installed.

(3) If no receipt is submitted for an installed device or the installation work in accordance with paragraph (a)(2) of this section, the carrier must submit a written statement explaining who installed the devices, how many devices were installed, the manufacturer and model numbers of the devices installed, and the vehicle identification numbers of the CMVs in which the devices were installed.

(b) Visual and functional EOBR inspections may be performed at any

FMCSA roadside inspection station or at the roadside inspection or weigh station facility of any State that receives Motor Carrier Safety Assistance Program funds under 49 U.S.C. 31102 and that provides such inspection services. The carrier may also request such inspections be performed at its principal place of business.

(c) Motor carriers issued remedial directives pursuant to this section must install in all of their CMVs EOBRs meeting the standards set forth in 49 CFR 395.16. Such motor carriers must maintain and use the EOBRs to verify compliance with part 395 for a period of 2 years following the issuance of the remedial directive. In addition to any other requirements imposed by the FMCSRs, during the period of time the carrier is subject to a remedial directive the carrier must maintain all records and reports generated by the EOBRs and, upon demand, produce those records to FMCSA personnel.

(d) *Malfunctioning devices.* Motor carriers subject to remedial directives shall maintain EOBRs installed in their CMVs in good working order. Such carriers must cause any malfunctioning EOBR to be repaired or replaced within 14 days from the date the carrier becomes aware of the malfunction. During this repair or replacement period, carriers subject to a remedial directive under this part must prepare a paper record of duty status pursuant to § 395.8 of this chapter as a temporary replacement for the non-functioning EOBR unit. All other provisions of the remedial directive will continue to apply during the repair and replacement period. Failure to comply with the terms of this paragraph may subject the affected CMV and/or driver to an out-of-service order pursuant to § 396.9(c) and § 395.13 of this chapter, respectively. Repeated violations of this paragraph may subject the motor carrier to the provisions of § 385.819.

§ 385.813 Issuance and conditional rescission of proposed unfitness determination.

(a) Simultaneously with the notice of remedial directive, FMCSA will issue a proposed unfitness determination. The proposed unfitness determination will explain that, if the motor carrier fails to comply with the terms of the remedial directive, the carrier will be unfit under the fitness standard in § 385.5, prohibited from engaging in interstate operations and intrastate operations affecting interstate commerce, and, in the case of a carrier registered under 49 U.S.C. 13902, have its registration revoked.

(b) FMCSA will conditionally rescind the proposed determination of unfitness upon the motor carrier's submission of sufficient proof of EOBR installation in accordance with § 385.811.

(c) During the period the remedial directive is in effect, FMCSA may reinstate the proposed unfitness determination and immediately prohibit the motor carrier from operating in interstate commerce and intrastate operations affecting interstate commerce if the motor carrier violates the provisions of the remedial directive.

§ 385.815 Exemption for AOBRD users.

(a) Upon written request by the motor carrier, FMCSA will grant an exception from the requirements of remedial directives under this section to motor carriers that already had installed in all commercial motor vehicles, at the time of the compliance review immediately preceding the issuance of the notice of remedial directive, AOBRDs compliant with 49 CFR 395.15 of this chapter.

(b) The carrier will be permitted to continue using the previously installed devices if the carrier can satisfactorily demonstrate to FMCSA that the carrier and its employees understand how to use the AOBRDs and the information derived from them.

(c) The carrier must either use and maintain the AOBRDs currently in its CMVs or install new devices compliance with § 395.16 of this chapter.

(d) Although FMCSA may suspend enforcement for noncompliance with the remedial directive, the directive will remain in effect; and the hours-of-service compliance of any motor carrier so exempted, will be subject to ongoing FMCSA oversight.

(e) The exemption granted under this section shall not apply to CMVs manufactured on or after the date 2 years from the effective date of this rule.

§ 385.817 Administrative review.

(a) A motor carrier may request FMCSA to conduct an administrative review if the carrier believes FMCSA has committed an error in issuing a notice of remedial directive under § 385.807 and proposed unfitness determination under § 385.813. Administrative reviews of notices of remedial directive and proposed unfitness determinations are limited to findings in the compliance review immediately preceding the notice.

(b) The motor carrier's request must explain the error it believes FMCSA committed in issuing the notice of remedial directive and proposed unfitness determination. The motor carrier must include a list of all factual

and procedural issues in dispute and any information or documents that support its argument.

(c) The motor carrier must submit its request in writing to the Assistant Administrator, Federal Motor Carrier Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590. The motor carrier must submit on the same day a copy of the request to FMCSA counsel in the FMCSA service center for the geographic area where the carrier maintains its principal place of business.

(1) If a motor carrier has received a notice of remedial directive and proposed unfitness determination, the carrier should submit its request in writing within 15 days from the date of the notice. This timeframe will allow FMCSA to issue a written decision before the prohibitions outlined in § 385.819(a) take effect. If the carrier submits its request for administrative review within 15 days of the issuance of the notice of remedial directive and proposed unfitness determination, FMCSA will stay the finality of the proposed unfitness determination until the Agency has ruled on the carrier's request. Failure to submit the request within this 15-day period may prevent FMCSA from ruling on the request before the prohibitions take effect.

(2) A motor carrier must make a request for an administrative review within 90 days after the date of the notice of remedial directive and proposed determination of unfitness under § 385.807.

(d) FMCSA may request the motor carrier to submit additional data or attend a conference to discuss the request for review. If the motor carrier does not provide the information requested, or does not attend the conference, FMCSA may dismiss its request for review.

(e) FMCSA will notify the motor carrier in writing of its decision following the administrative review. FMCSA will complete its review:

(1) Within 30 days after receiving a request from a hazardous materials or passenger motor carrier that has received a proposed unfitness determination;

(2) Within 45 days after receiving a request from any other motor carrier that has received a proposed unfitness determination;

(3) With respect to requests for administrative review of notices of remedial directive, as soon as practicable but not later than 60 days after receiving the request.

(f) The decision regarding a proposed unfitness determination constitutes final Agency action.

(g) The provisions of this section will not affect procedures for administrative review of proposed or final safety ratings in accordance with § 385.15 or for requests for changes to safety ratings based upon corrective action in accordance with § 385.17.

§ 385.819 Effect of failure to comply with remedial directive.

(a) A motor carrier that fails or refuses to comply with the terms of a remedial directive issued under this subpart, including a failure or refusal to provide proof of EOBR installation in accordance with § 385.811, does not meet the safety fitness standard set forth in § 385.5(b). With respect to such carriers, the proposed determination of unfitness issued in accordance with § 385.813 becomes final, and the motor carrier is prohibited from operating, as follows:

(1) Motor carriers transporting hazardous materials in quantities requiring placarding and motor carriers transporting passengers in a CMV are prohibited from operating CMVs in interstate commerce and in operations that affect interstate commerce beginning on the 46th day after the date of FMCSA's notice of remedial directive and proposed unfitness determination. A motor carrier subject to the registration requirements of 49 U.S.C. 13901 will have its registration revoked on the 46th day after the date of FMCSA's notice of remedial directive and proposed unfitness determination.

(2) All other motor carriers are prohibited from operating a CMV in interstate commerce and in operations that affect interstate commerce beginning on the 61st day after the date of FMCSA's notice of remedial directive and proposed unfitness determination. A motor carrier subject to the registration requirements of 49 U.S.C. 13901 will have its registration revoked on the 61st day after the date of FMCSA's notice of remedial directive and proposed unfitness determination. If FMCSA determines the motor carrier is making a good-faith effort to satisfy the terms of the remedial directive, FMCSA may allow the motor carrier to operate for up to 60 additional days.

(b) If a proposed unfitness determination becomes a final determination, FMCSA will issue an order prohibiting the motor carrier from operating in interstate commerce. If the motor carrier is required to register under 49 U.S.C. 13901, FMCSA will revoke the motor carrier's registration on the dates specified in § 385.819(a)(1) and (a)(2).

(c) If FMCSA has prohibited a motor carrier from operating in interstate

commerce under paragraph (a) of this section and, if applicable, revoked the carrier's registration, and the motor carrier subsequently complies with the terms and conditions of the remedial directive and provides proof of EOBR installation under § 385.811, the carrier may request FMCSA to lift the prohibition on operations at any time after the prohibition becomes effective. The request should be submitted in writing in accordance with § 385.817(c).

(d) A Federal Agency must not use for CMV transportation a motor carrier that FMCSA has determined is unfit.

(e) *Penalties.* If a proposed unfitness determination becomes a final determination, FMCSA will issue an order prohibiting the motor carrier from operating in interstate commerce and any intrastate operations that affect interstate commerce and, if applicable, revoking its registration. Any motor carrier that operates a CMV in violation of this section will be subject to the penalty provisions listed in 49 U.S.C. 521(b).

■ 15. Amend Appendix B to part 385 by revising paragraphs (b), (c), and (d) and section VI, paragraph (a), to read as follows:

Appendix B to Part 385—Explanation of Safety Rating Process

* * * * *

(b) As directed, FMCSA promulgated a safety fitness regulation, entitled "Safety Fitness Procedures," which established a procedure to determine the safety fitness of motor carriers through the assignment of safety ratings and established a "safety fitness standard" that a motor carrier must meet to obtain a "Satisfactory" safety rating. FMCSA later amended the safety fitness standard to add a distinct requirement that motor carriers also be in compliance with applicable remedial directives.

(c) To meet the safety fitness standard, a motor carrier must meet two requirements. First, the carrier must demonstrate to FMCSA it has adequate safety management controls in place that function effectively to ensure acceptable compliance with the applicable safety requirements. (See § 385.5(a)). A "safety fitness rating methodology" (SFRM) developed by FMCSA uses data from compliance reviews (CRs) and roadside inspections to rate motor carriers. Second, a motor carrier must also be in compliance with any applicable remedial directives issued in accordance with subpart J. This second requirement is set forth in § 385.5(b).

(d) The safety rating process developed by FMCSA is used to:

1. Evaluate the first component of the safety fitness standard, under § 385.5(a), and assign one of three safety ratings (Satisfactory, Conditional, or Unsatisfactory) to motor carriers operating in interstate commerce. This process conforms to § 385.5(a), Safety fitness standard, and § 385.7, Factors to be considered in determining a safety rating.

2. Identify motor carriers needing improvement in their compliance with the Federal Motor Carrier Safety Regulations (FMCSRs) and applicable Hazardous Materials Regulations (HMRs). These are carriers rated Unsatisfactory or Conditional.

* * * * *

VI. Conclusion

(a) FMCSA believes this "safety fitness rating methodology" is a reasonable approach to assignment of a safety rating, as required by the safety fitness regulations (§ 385.9), that most closely reflects the motor carrier's current level of compliance with the safety fitness standard in § 385.5(a). This methodology has the capability to incorporate regulatory changes as they occur.

* * * * *

■ 16. Add Appendix C to part 385 to read as follows:

Appendix C to Part 385—Regulations Pertaining to Remedial Directives in Part 385, Subpart J

§ 395.1(h)(1)(i) Requiring or permitting a property-carrying commercial motor vehicle driver to drive more than 15 hours (Driving in Alaska).

§ 395.1(h)(1)(ii) Requiring or permitting a property-carrying commercial motor vehicle driver to drive after having been on duty 20 hours (Driving in Alaska).

§ 395.1(h)(1)(iii) Requiring or permitting a property-carrying commercial motor vehicle driver to drive after having been on duty more than 70 hours in 7 consecutive days (Driving in Alaska).

§ 395.1(h)(1)(iv) Requiring or permitting a property-carrying commercial motor vehicle driver to drive after having been on duty more than 80 hours in 8 consecutive days (Driving in Alaska).

§ 395.1(h)(2)(i) Requiring or permitting a passenger-carrying commercial motor vehicle driver to drive more than 15 hours (Driving in Alaska).

§ 395.1(h)(2)(ii) Requiring or permitting a passenger-carrying commercial motor vehicle driver to drive after having been on duty 20 hours (Driving in Alaska).

§ 395.1(h)(2)(iii) Requiring or permitting a passenger-carrying commercial motor vehicle driver to drive after having been on duty more than 70 hours in 7 consecutive days (Driving in Alaska).

§ 395.1(h)(2)(iv) Requiring or permitting a passenger-carrying commercial motor vehicle driver to drive after having been on duty more than 80 hours in 8 consecutive days (Driving in Alaska).

§ 395.1(o) Requiring or permitting a property-carrying commercial motor vehicle driver to drive after having been on duty 16 consecutive hours.

§ 395.3(a)(1) Requiring or permitting a property-carrying commercial motor vehicle driver to drive more than 11 hours.

§ 395.3(a)(2) Requiring or permitting a property-carrying commercial motor vehicle driver to drive after the end of the 14th hour after coming on duty.

§ 395.3(b)(1) Requiring or permitting a property-carrying commercial motor vehicle

driver to drive after having been on duty more than 60 hours in 7 consecutive days.

§ 395.3(b)(2) Requiring or permitting a property-carrying commercial motor vehicle driver to drive after having been on duty more than 70 hours in 8 consecutive days.

§ 395.3(c)(1) Requiring or permitting a property-carrying commercial motor vehicle driver to restart a period of 7 consecutive days without taking an off-duty period of 34 or more consecutive hours.

§ 395.3(c)(2) Requiring or permitting a property-carrying commercial motor vehicle driver to restart a period of 8 consecutive days without taking an off-duty period of 34 or more consecutive hours.

§ 395.5(a)(1) Requiring or permitting a passenger-carrying commercial motor vehicle driver to drive more than 10 hours.

§ 395.5(a)(2) Requiring or permitting a passenger-carrying commercial motor vehicle driver to drive after having been on duty 15 hours.

§ 395.5(b)(1) Requiring or permitting a passenger-carrying commercial motor vehicle driver to drive after having been on duty more than 60 hours in 7 consecutive days.

§ 395.5(b)(2) Requiring or permitting a passenger-carrying commercial motor vehicle driver to drive after having been on duty more than 70 hours in 8 consecutive days.

§ 395.8(a) Failing to require driver to make a record of duty status.

§ 395.8(e) False reports of records of duty status.

§ 395.8(i) Failing to require driver to forward within 13 days of completion, the original of the record of duty status.

§ 395.8(k)(1) Failing to preserve driver's record of duty status for 6 months.

§ 395.8(k)(1) Failing to preserve driver's records of duty status supporting documents for 6 months.

PART 395—HOURS OF SERVICE OF DRIVERS

■ 17. The authority citation for part 395 is revised to read as follows:

Authority: 49 U.S.C. 508, 13301, 13902, 31133, 31136, 31502, 31504, and § 204, Pub. L. 104-88, 109 Stat. 803, 941 (49 U.S.C. 701 note); Sec. 114, Pub. L. 103-311, 108 Stat. 1673, 1677; Sec. 217, Pub. L. 106-159, 113 Stat. 1748, 1767; and 49 CFR 1.73.

■ 18. Amend § 395.2 by adding the following definitions in alphabetical order:

§ 395.2 Definitions.

* * * * *

CD-RW (Compact Disc—Re-Writeable) means an optical disc digital storage format that allows digital data to be erased and rewritten many times. The technical and physical specifications for CD-RW are described in the document Orange Book Part III: CD-RW, published by Royal Philips Electronics.

CMRS (Commercial Mobile Radio Services) An FCC designation for any carrier or licensee whose wireless

network is connected to the public switched telephone network and/or is operated for profit. Another common term for these entities is cellular telephony providers.

* * * * *

802.11 is a set of communications and product compatibility standards for wireless local area networks (WLAN). The 802.11 standards are also known as WiFi by marketing convention.

Electronic on-board recording device (EOBR) means an electronic device that is capable of recording a driver's hours of service and duty status accurately and automatically and that meets the requirements of § 395.16. The device must be integrally synchronized with specific operations of the commercial motor vehicle in which it is installed. The EOBR must record, at minimum, the information listed in § 395.16(b).

* * * * *

Integrally synchronized refers to an AOBRD or EOBR that receives and records the engine use status and distance traveled for the purpose of deriving on-duty driving status from a source or sources internal to the CMV.

* * * * *

USB (Universal Serial Bus) is a serial bus interface standard for connecting electronic devices.

UTC (Coordinated Universal Time) is the international civil time standard, determined by using highly precise atomic clocks. It is the basis for civil standard time in the United States and its territories. UTC time refers to time kept on the Greenwich meridian (longitude zero), which is 5 hours ahead of Eastern Standard Time. UTC times are expressed in terms of a 24-hour clock. Standard time within any U.S. time zone is offset from UTC by a given number of hours determined by the time zone's distance from the Greenwich meridian.

* * * * *

■ 19. Amend § 395.8 by revising paragraphs (a)(2) and (e) to read as follows:

§ 395.8 Driver's record of duty status.

(a) * * *

(2) Every driver operating a commercial motor vehicle equipped with either an automatic on-board recording device meeting the requirements of § 395.15 or an electronic on-board recorder meeting the requirements of § 395.16 must record his or her duty status using the device installed in the vehicle. The requirements of this section shall not apply, except for paragraphs (e) and (k)(1) and (2) of this section.

* * * * *

(e) Failure to complete the record of duty activities of either this section, § 395.15 or § 395.16, failure to preserve a record of such duty activities, or making false reports in connection with such duty activities shall make the driver and/or the carrier liable to prosecution.

* * * * *

■ 20. Add § 395.11 to read as follows:

§ 395.11 Supporting documents for drivers using EOBRs.

(a) Motor carriers maintaining date, time and location data produced by a § 395.16-compliant EOBR need only maintain additional supporting documents (e.g., driver payroll records, fuel receipts) that provide the ability to verify on-duty not driving activities and off-duty status according to the requirements of § 395.8(k).

(b) This section does not apply to motor carriers and owner-operators that have been issued a remedial directive to install, use, and maintain EOBRs.

■ 21. Amend § 395.13 by revising paragraph (b)(2) and by adding paragraph (b)(4) to read as follows:

§ 395.13 Drivers declared out of service.

* * * * *

(b) * * *

(2) Every driver required to maintain a record of duty status under § 395.8 must have a record of duty status current on the day of examination and for the prior 7 consecutive days.

* * * * *

(4) No driver shall drive a CMV in violation of § 385.811(d) of this chapter.

* * * * *

■ 22. Amend § 395.15 by adding introductory text to paragraph (a), and revising paragraph (a)(1) to read as follows:

§ 395.15 Automatic on-board recording devices.

(a) *Applicability and authority to use.* This section applies to automatic on-board recording devices (AOBRDs) used to record drivers' hours of service as specified by part 395.

(1) A motor carrier may require a driver to use an AOBRD to record the driver's hours of service in lieu of complying with the requirements of § 395.8 of this part. For commercial motor vehicles manufactured prior to June 4, 2012, manufacturers or motor carriers may install an electronic device to record hours of service if the device meets the requirements of either this section or § 395.16.

* * * * *

■ 23. Add § 395.16 to read as follows:

§ 395.16 Electronic on-board recording devices.

(a) *Applicability and authority to use.* This section applies to electronic on-board recording devices (EOBRs) used to record the driver's hours of service as specified by part 395. Motor carriers subject to a remedial directive to install, use and maintain EOBRs, issued in accordance with 49 CFR part 385, subpart J, must comply with this section.

(1) A motor carrier may require a driver to use an EOBR to record the driver's hours of service in lieu of complying with the requirements of § 395.8 of this part. For commercial motor vehicles manufactured after June 4, 2012, any electronic device installed in a CMV by a manufacturer or motor carrier to record hours of service must meet the requirements of this section.

(2) Every driver required by a motor carrier to use an EOBR shall use such device to record the driver's hours of service.

(b) *Information to be recorded.* An EOBR must record the following information:

(1) Name of driver and any co-driver(s), and corresponding driver identification information (such as a user ID and password). However, the name of the driver and any co-driver is not required to be transmitted as part of the downloaded file during a roadside inspection.

(2) Duty status.

(3) Date and time.

(4) Location of CMV.

(5) Distance traveled.

(6) Name and USDOT Number of motor carrier.

(7) 24-hour period starting time (e.g., midnight, 9 a.m., noon, 3 p.m.).

(8) The multiday basis (7 or 8 days) used by the motor carrier to compute cumulative duty hours and driving time.

(9) Hours in each duty status for the 24-hour period, and total hours.

(10) Truck or tractor and trailer number.

(11) Shipping document number(s), or name of shipper and commodity.

(c) *Duty status categories.* An EOBR must use the following duty statuses:

(1) "Off duty" or "OFF".

(2) "Sleeper berth" or "SB", to be used only if sleeper berth is used.

(3) "Driving" or "D".

(4) "On-duty not driving" or "ON".

(d) *Duty status defaults.*

(1) An EOBR must automatically record driving time. If the CMV is being used as a personal conveyance, the driver must affirmatively enter an annotation before the CMV begins to move.

(2) When the CMV is stationary for 5 minutes or more, the EOBR must default

to on-duty not driving, and the driver must enter the proper duty status.

(3) An EOBR must record the results of power-on self-tests and diagnostic error codes.

(e) *Date and time.*

(1) The date and time must be recorded on the EOBR output record as specified under paragraph (i) of this section at each change of duty status, and at intervals of no greater than 60 minutes when the CMV is in motion. The date and time must be displayed on the EOBR's visual output device.

(2) The date and time must be obtained, transmitted, and recorded in such a way that it cannot be altered by a motor carrier, driver, or third party.

(3) The driver's duty status record must be prepared, maintained, and submitted using the time standard in effect at the driver's home terminal, for a 24-hour period beginning with the time specified by the motor carrier for that driver's home terminal.

(4) The time must be coordinated to UTC and the absolute deviation shall not exceed 10 minutes at any time.

(f) *Location.*

(1) Information used to determine the location of the CMV must be derived from a source not subject to alteration by the motor carrier or driver.

(2) The location description for the duty status change, and for intervening intervals while the CMV is in motion, must be sufficiently precise to enable Federal, State, and local enforcement personnel to quickly determine the vehicle's geographic location on a standard map or road atlas. The term "sufficiently precise," for purposes of this paragraph means the nearest city, town or village.

(3) When the CMV is in motion, location and time must be recorded at intervals no greater than 60 minutes. This recorded information must be capable of being made available in an output file format as specified in Appendix A to this part, but does not need to be displayed on the EOBR's visual output device.

(4) For each change of duty status (e.g., the place and time of reporting for work, starting to drive, on-duty not driving, and where released from work), the name of the nearest city, town, or village, with State abbreviation, must be recorded.

(5) The EOBR must record location names using codes derived from satellite or terrestrial sources, or a combination of these. The location codes must correspond, at a minimum, to ANSI INCITS 446-2008, "American National Standard for Information Technology—Identifying Attributes for Named Physical and Cultural

Geographic Features (Except Roads and Highways) of the United States, Its Territories, Outlying Areas, and Freely Associated Areas and the Waters of the Same to the Limit of the Twelve-Mile Statutory Zone (10/28/2008)," where "GNIS Feature Class" = "Populated Place" (incorporated by reference, *see* § 395.18). (For further information, *see also* the Geographic Names Information System (GNIS) at <http://geonames.usgs.gov/domestic/index.html>).

(g) *Distance traveled.*

(1) Distance traveled must use units of miles or kilometers driving during each on-duty driving period and total for each 24-hour period for each driver operating the CMV.

(2) If the EOBR records units of distance in kilometers, it must provide a means to display the equivalent distance in miles.

(3) Distance traveled information obtained from a source internal to the CMV must be accurate to the distance traveled as measured by the CMV's odometer.

(h) *Review of information by driver.*

(1) The EOBR must allow for the driver's review of each day's record before the driver submits the record to the motor carrier.

(2) The driver must review the information contained in the EOBR record and affirmatively note the review before submitting the record to the motor carrier.

(3) The driver may annotate only non-driving-status periods and the use of a CMV as a personal conveyance as described in paragraph (d)(1) of this section. The driver must electronically confirm his or her intention to make any annotations. The annotation must not overwrite the original record.

(4) If the driver makes a written entry on a hardcopy output of an EOBR relating to his or her duty status, the entries must be legible and in the driver's own handwriting.

(i) *Information reporting requirements.*

(1) An EOBR must make it possible for authorized Federal, State, or local officials to immediately check the status of a driver's hours of service.

(2) An EOBR must produce, upon demand, a driver's hours-of-service record in either electronic or printed form. It must also produce a digital file in the format described in Appendix A to this part. The record must show the time and sequence of duty status changes including the driver's starting time at the beginning of each day. As an alternative, the EOBR must be able to provide a driver's hours-of-service

record as described in paragraph (i)(6) of this section.

(3) This information may be used in conjunction with handwritten or printed records of duty status for the previous 7 days.

(4) Hours-of-service information must be made accessible to authorized Federal, State, or local safety assurance officials for their review without requiring the official to enter in or upon the CMV. The output record must conform to the file format specified in Appendix A to this part.

(5) The driver must have in his or her possession records of duty status for the previous 7 consecutive days available for inspection while on duty. These records must consist of information stored in and retrievable from the EOBR, handwritten records, records available from motor carriers' support systems, other printed records, or any combination of these. Electronic records must be capable of one-way transfer through wired and wireless methods to portable computers used by roadside safety assurance officials and must provide files in the format specified in Appendix A to this part. Wired communication information interchange methods must comply with the "Universal Serial Bus Specification (Revision 2.0) incorporated by reference, see § 395.18) and additional specifications in Appendix A, paragraph 2.2 to this part. Wireless communication information interchange methods must comply with the requirements of the 802.11g-2003 standard as defined in the 802.11-2007 base standard "IEEE Standard for Information Technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements: Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications" (IEEE Std. 802.11-2007) (incorporated by reference, see § 395.18), or CMRS.

(6) Support systems used in conjunction with EOBRs at a driver's home terminal or the motor carrier's principal place of business must be capable of providing authorized Federal, State, or local officials with summaries of an individual driver's hours of service records, including the information specified in § 395.8(d). The support systems must also provide information concerning on-board system sensor failures and identification of amended and edited data. Support systems must provide a file in the format specified in Appendix A to this part. The system must also be able to produce a copy of files on portable storage media (CD-RW, USB 2.0 drive) upon request of authorized safety

assurance officials. The support system may be maintained by a third-party service provider on behalf of the motor carrier.

(j) *Driver identification.* For the driver to log into the EOBR, the EOBR must require the driver to enter information (such as a user ID and password) that identifies the driver or to provide other information (such as smart cards, biometrics) that identifies the driver.

(k) *Availability of records of duty status.*

(1) An EOBR must be capable of producing duty status records for the current day and the previous 7 days from either the information stored in and retrievable from the EOBR or motor carrier support system records, or any combination of these.

(2) If an EOBR fails, the driver must do the following:

(i) Note the failure of the EOBR and inform the motor carrier within 2 days.

(ii) Reconstruct the record of duty status for the current day and the previous 7 days, less any days for which the driver has records.

(iii) Continue to prepare a handwritten record of all subsequent duty status until the device is again operational.

(iv) A brief (less than 5 minute) loss of connectivity between the EOBR and a location-tracking system or the motor carriers' support system is not considered an EOBR failure for the purpose of this section.

(l) *On-board information.* Each commercial motor vehicle must have onboard the commercial motor vehicle an information packet containing the following items:

(1) An instruction sheet describing how data may be stored and retrieved from the EOBR.

(2) A supply of blank driver's records of duty status graph-grids sufficient to record the driver's duty status and other related information for the duration of the current trip.

(m) *Submission of driver's record of duty status.*

(1) The driver must submit electronically, to the employing motor carrier, each record of the driver's duty status.

(2) For motor carriers not subject to the remedies provisions of part 385 subpart J of this chapter, each record must be submitted within 13 days of its completion.

(3) For motor carriers subject to the remedies provisions of part 385 subpart J of this chapter, each record must be submitted within 3 days of its completion.

(4) The driver must review and verify that all entries are accurate prior to

submission to the employing motor carrier.

(5) The submission of the record of duty status certifies that all entries made by the driver are true and correct.

(n) *EOBR display requirements.* An EOBR must have the capability of displaying all of the following information:

(1) The driver's name and EOBR login ID number on all EOBR records associated with that driver, including records in which the driver serves as a co-driver.

(2) The driver's total hours of driving during each driving period and the current duty day.

(3) The total hours on duty for the current duty day.

(4) Total miles or kilometers of driving during each driving period and the current duty day.

(5) Total hours on duty and driving time for the prior 7-consecutive-day period, including the current duty day.

(6) Total hours on duty and driving time for the prior 8-consecutive-day period, including the current duty day.

(7) The sequence of duty status for each day, and the time of day and location for each change of duty status, for each driver using the device.

(8) EOBR serial number or other identification, and identification number(s) of vehicle(s) operated that day.

(9) Remarks, including fueling, waypoints, loading and unloading times, unusual situations, or violations.

(10) Driver's override of an automated duty status change to driving if using the vehicle for personal conveyance or for yard movement.

(11) The EOBR may record other data as the motor carrier deems appropriate, including the date and time of crossing a State line for purposes of fuel-tax reporting.

(o) *Performance of recorders.* A motor carrier that uses an EOBR for recording a driver's records of duty status instead of the handwritten record must ensure the EOBR meets the following requirements:

(1) The EOBR must permit the driver to enter information into the EOBR only when the commercial motor vehicle is at rest.

(2) The EOBR and associated support systems must not permit alteration or erasure of the original information collected concerning the driver's hours of service, or alteration of the source data streams used to provide that information.

(3) The EOBR must be able to perform a power-on self-test, as well as a self-test at any point upon request of an authorized safety assurance official. The

EOBR must provide an audible and visible signal as to its functional status. It must record the outcome of the self-test and its functional status as a diagnostic event record in conformance with Appendix A to this part.

(4) The EOBR must provide an audible and visible signal to the driver at least 30 minutes in advance of reaching the driving time limit and the on-duty limit for the 24-hour period.

(5) The EOBR must be able to track total weekly on-duty and driving hours over a 7- or 8-day consecutive period. The EOBR must be able to warn a driver at least 30 minutes in advance of reaching the weekly duty-/driving-hour limitation.

(6) The EOBR must warn the driver via an audible and visible signal that the device has ceased to function. “Ceasing to function” for the purpose of this paragraph does not include brief losses of communications signals during such time as, but not limited to, when the vehicle is traveling through a tunnel.

(7) The EOBR must record a code corresponding to the reason it has ceased to function and the date and time of that event.

(8) The audible signal must be capable of being heard and discerned by the driver when seated in the normal driving position, whether the CMV is in motion or parked with the engine operating. The visual signal must be visible to the driver when the driver is seated in the normal driving position.

(9) The EOBR must be capable of recording separately each driver's duty status when there is a multiple-driver operation.

(10) The EOBR device/system must identify sensor failures and edited and annotated data when downloaded or reproduced in printed form.

(11) The EOBR device/system must identify annotations made to all records, the date and time the annotations were made, and the identity of the person making them.

(12) If a driver or any other person annotates a record in an EOBR or an EOBR support system, the annotation must not overwrite the original contents of the record.

(p) *Motor Carrier Requirements.*

(1) The motor carrier must not alter or erase, or permit or require alteration or erasure of, the original information collected concerning the driver's hours of service, the source data streams used to provide that information, or information contained in its EOBR support systems that use the original information and source data streams.

(2) The motor carrier must ensure the EOBR is calibrated, maintained, and recalibrated in accordance with the

manufacturer's specifications; the motor carrier must retain records of these activities.

(3) The motor carrier's drivers and other personnel reviewing and using EOBRs and the information derived from them must be adequately trained regarding the proper operation of the device.

(4) The motor carrier must maintain a second copy (back-up copy) of the electronic hours-of-service files, by month, on a physical device different from that on which the original data are stored.

(5) The motor carrier must review the EOBR records of its drivers for compliance with part 395.

(6) If the motor carrier receives or discovers information concerning the failure of an EOBR, the carrier must document the failure in the hours-of-service record for that driver.

(q) *Manufacturer's self-certification.*

(1) The EOBR and EOBR support systems must be certified by the manufacturer as evidence that they have been sufficiently tested to meet the requirements of § 395.16 and Appendix A to this part under the conditions in which they would be used.

(2) The exterior faceplate of the EOBR must be marked by the manufacturer with the text “USDOT-EOBR” as evidence that the device has been tested and certified as meeting the performance requirements of § 395.16 and Appendix A to this part.

■ 24. Add § 395.18 to read as follows:

§ 395.18 Matter incorporated by reference.

(a) *Incorporation by reference.* Certain materials are incorporated by reference in part 395, with the approval of the Director of the Federal Register under 5 U.S.C. 552(a), and 1 CFR part 51. For materials subject to change, only the specific version approved by the Director of the Office of the Federal Register and specified in the regulation is incorporated. To enforce any edition other than that specified in this section, the Federal Motor Carrier Safety Administration must publish notice of change in the **Federal Register** and the material must be available to the public. All of the approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to <http://www.archives.gov/federal-register/cfr/ibr-locations.html>. Also, it is available for inspection at the Federal Motor Carrier Safety Administration, Office of Bus and Truck Standards and Operations (MC-PS), 1200 New Jersey Ave., SE., Washington, DC 20590-00001, (202) 366-4325, and

is available from the sources listed in paragraphs (b) and (c) of this section.

(b) *Institute of Electrical and Electronic Engineers (IEEE).* 3 Park Avenue, New York, New York 10016-5997. Web page is <http://www.ieee.org/web/publications/home>; telephone is (800) 678-4333.

(1) “IEEE Standard for Information Technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements: Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications,” IEEE Computer Society, Sponsored by the LAN/MAN Standards Committee: June 12, 2007 (IEEE Std. 802.11-2007). Incorporation by reference approved for § 395.16(i); and Appendix A to part 395, paragraph 2.3.

(2) [Reserved]

(c) *Universal Serial Bus Implementers Forum (USBIF).* 3855 SW. 153rd Drive, Beaverton, Oregon 97006. Web page is <http://www.usb.org>; telephone is (503) 619-0426.

(1) “Universal Serial Bus Specification,” Compaq, Hewlett-Packard, Intel, Lucent, Microsoft, NEC, Philips; April 27, 2000 (Revision 2.0). Incorporation by reference approved for § 395.16(i) and Appendix A to part 395, paragraph 2.2.

(2) [Reserved]

(d) *American National Standards Institute (ANSI).* 11 West 42nd Street, New York, New York 10036. Web page is <http://webstore.ansi.org>; telephone is (212) 642-4900.

(1) “ANSI INCITS 446-2008, American National Standard for Information Technology—Identifying Attributes for Named Physical and Cultural Geographic Features (Except Roads and Highways) of the United States, Its Territories, Outlying Areas, and Freely Associated Areas and the Waters of the Same to the Limit of the Twelve-Mile Statutory Zone (10/28/2008),” (ANSI INCITS 446-2008). Incorporation by reference approved for § 395.16(f); Appendix A to part 395, paragraph 1.3, Table 2; and Appendix A to part 395, paragraph 3.1.1.3. (For further information, *see also* the Geographic Names Information System (GNIS) at <http://geonames.usgs.gov/domestic/index.html>.)

(2) [Reserved]

■ 25. Add Appendix A to 49 CFR part 395 to read as follows:

Appendix A to Part 395—Electronic On-Board Recorder Performance Specifications
1. Data Elements Dictionary for Electronic On-Board Recorders (EOBRs)

1.1 To facilitate the electronic transfer of records to roadside inspection personnel and compliance review personnel, and provide the ability of various third-party and proprietary EOBR devices to be

interoperable, a consistent electronic file format and record layout for the electronic RODS data to be recorded are necessary. This EOBR data elements dictionary provides a standardized and consistent format for EOBR output data.

EOBR Data File Format

1.2 Regardless of the particular electronic file type (such as ASCII or XML) ultimately used for recording the electronic RODS produced by an EOBR, RODS data must be

recorded according to a “flat file” database model format. A flat file is a simple database in which all information is stored in a plain text format with one database “record” per line. Each of these data records is divided into “fields” using delimiters (as in a comma-separate-values data file) or based on fixed column positions. Table 1 below presents the general concept of a flat data file consisting of data “fields” (columns) and data “records” (rows).

Table 1: Flat Data File Database Model

FIELDS →						
RECORDS ↓	Person First Name	Person Last Name	Driver PIN	Event Date	Event Time	Status Code
	William	Smith	978354	20050718	12:11	D
	William	Smith	978354	20050718	15:17	SB
	William	Smith	978354	20050718	18:53	D
	William	Smith	978354	20050718	21:43	ON
	William	Smith	978354	20050718	22:14	OFF
	William	Smith	978354	20050719	06:25	ON
	William	Smith	978354	20050719	06:47	D
	William	Smith	978354	20050719	13:32	SB
	William	Smith	978354	20050719	15:27	D
	William	Smith	978354	20050719	20:04	SB

1.3 The data elements dictionary describes the data fields component of the above framework. Individual data records must be generated and recorded whenever there is a change in driver duty status, an EOBR diagnostic event (such as power-on/

off, self test, *etc.*), or when one or more data fields of an existing data record are later amended. In the last case, the corrected record must be recorded and noted as “current” in the “Event Status Code” data field, with the original record maintained in

its unedited form and noted as “historical” in the “Event Status Code” data field. The EOBR Data Elements Dictionary is described in Table 2. The event codes are listed in Table 3.

TABLE 2—EOBR DATA ELEMENTS DICTIONARY

Data element	Data element definition	Type	Length	Valid values and notes
Driver Identification Data				
Driver First Name	First name of the driver	A	35	See Note 1.
Driver Last Name	Last name, family name, or surname of the driver	A	35	See Note 1.
Driver PIN/ID	Numeric identification number assigned to a driver by the motor carrier.	A	40	
Vehicle Identification Data				
Tractor Number	Motor carrier assigned identification number for tractor unit.	A	10	
Trailer Number	Motor carrier assigned identification number for trailer	A	10	
Tractor VIN Number ..	Unique vehicle ID number assigned by manufacturer according to US DOT regulations.	A	17	
Co-Driver Data				
Co-Driver First Name	First name of the co-driver	A	35	See Note 1.
Co-Driver Last Name	Last name, family name or surname of the co-driver	A	35	See Note 1.
Co-Driver ID	Numeric identification number assigned to a driver by the motor carrier.	A	40	
Company Identification Data				
Carrier USDOT Number.	USDOT Number of the motor carrier assigned by FMCSA.	N	8	

TABLE 2—EOBR DATA ELEMENTS DICTIONARY—Continued

Data element	Data element definition	Type	Length	Valid values and notes
Carrier Name	Name or trade name of the motor carrier company appearing on the Form MCS-150.	A	120	
Shipment Data				
Shipping Document Number.	Shipping document number	A	40	
Event Data				
Event Sequence ID ...	A serial identifier for an event that is unique to a particular vehicle and a particular day.	N	4	0001 through 9999.
Event Status Code	Character codes for the four driver duty status change events, State border crossing event, and diagnostic events.	A	3	OFF = Off Duty SB = Sleeper Berth D = On Duty Driving ON = On Duty Not Driving DG = Diagnostic.
Event Date	The date when an event occurred	N (Date)	8	UTC (universal time) recommended. Format: YYYYMMDD.
Event Time	The time when an event occurred	N (Time)	6	UTC (universal time) recommended. Format: HHMMSS (hours, minutes, seconds).
Event Latitude	Latitude of a location where an event occurred	N	2,6	Decimal format: XX.XXXXXX.
Event Longitude	Longitude of a location where an event occurred	N	3,6	Decimal format: XXX.XXXXXX.
Place Name	The location codes must correspond, at a minimum, to ANSI INCITS 446-2008, “American National Standard for Information Technology—Identifying Attributes for Named Physical and Cultural Geographic Features (Except Roads and Highways) of the United States, Its Territories, Outlying Areas, and Freely Associated Areas and the Waters of the Same to the Limit of the Twelve-Mile Statutory Zone (10/28/2008),” where “GNIS Feature Class” = “Populated Place” (incorporated by reference, see § 395.18). (For further information, see also the Geographic Names Information System (GNIS) at http://geonames.usgs.gov/domestic/index.html).	N	5	Unique within a FIPS state code. Lookup list derived from GNIS.
Place Distance Miles	Distance in miles to nearest populated place from the location where an event occurred.	N	4	
Total Vehicle Miles	Total vehicle miles (as noted on vehicle odometer or as measured by any other compliant means such as vehicle location system, <i>etc.</i>).	N	7	With total vehicle mileage recorded at the time of each event, vehicle miles traveled while driving, <i>etc.</i> , can be computed.
Event Update Status Code.	A status of an event, either Current (the most up-to-date update or edit) or Historical (the original record if the record has subsequently been updated or edited).	A	1	C = Current, H = Historical.
Diagnostic Event Code.	For diagnostic events (events where the “Event Status Code” is noted as “DG”), records the type of diagnostic performed (e.g., power-on, self test, power-off, <i>etc.</i>).	A	2	(See Table 3).
Event Error Code	Error code associated with an event	A	2	(See Table 3).
Event Update Date	The date when an event record was last updated or edited.	N (Date)	8	UTC (universal time) recommended. Format: YYYYMMDD.
Event Update Time ...	Then time when an event record was last updated or edited.	N (Time)	6	UTC (universal time) recommended. Format: HHMMSS (hours, minutes, seconds).
Event Update Person ID.	An identifier of the person who last updated or edited a record.	A	40	
Event Update Text	A textual note related to the most recent record update or edit.	A	60	Brief narrative regarding reason for record update or edit.

Note 1: This element must not be included in the records downloaded from an EOBR or support system at roadside.

TABLE 3—EOBR DIAGNOSTIC EVENT CODES

Code class	Code	Brief description	Full description
General System Diagnostic	PWR_ON	Power on	EOBR initial power-on.
General System Diagnostic	PWROFF	Power off	EOBR power-off.
General System Diagnostic	TESTOK	test okay	EOBR self test successful.
General System Diagnostic	SERVIC	Service	EOBR Malfunction (return unit to factory for servicing).
General System Diagnostic	MEMERR	memory error	System memory error.
General System Diagnostic	LOWVLT	Low voltage	Low system supply voltage.
General System Diagnostic	BATLOW	battery low	Internal system battery backup low.
General System Diagnostic	CLKERR	clock error	EOBR system clock error (clock not set or defective).
General System Diagnostic	BYPASS	Bypass	EOBR system bypassed (RODS data not collected).
Data Storage Diagnostic	INTFUL	internal memory full	Internal storage memory full (requires download or transfer to external storage).
Data Storage Diagnostic	DATAACC	Data accepted	System accepted driver data entry.
Data Storage Diagnostic	EXTFUL	external memory full	External memory full (smartcard or other external data storage device full).
Data Storage Diagnostic	EXTERR	external data access error.	Access external storage device failed.
Data Storage Diagnostic	DLOADY	download yes	EOBR data download successful.
Data Storage Diagnostic	DLOADN	download no	Data download rejected (unauthorized request/ wrong Password).
Driver Identification Issue	NODRID	no driver ID	No driver information in system and vehicle is in motion.
Driver Identification Issue	PINERR	PIN error	Driver PIN/identification number invalid.
Driver Identification Issue	DRIDRD	Driver ID read	Driver information successfully read from external storage device (transferred to EOBR).
Peripheral Device Issue	DPYERR	display error	EOBR display malfunction.
Peripheral Device Issue	KEYERR	keyboard error	EOBR keyboard/input device malfunction.
External Sensor Issue	NOLTLN	no latitude longitude	No latitude and longitude from positioning sensor.
External Sensor Issue	NOTSYC	no time synchronization	Unable to synchronize with external time reference input.
External Sensor Issue	COMERR	communications error	Unable to communicate with external data link (to home office or wireless service provider).
External Sensor Issue	NO_ECM	no ECM data	No sensory information received from vehicle's Engine Control Module (ECM).
External Sensor Issue	ECM_ID	ECM ID number mismatch.	ECM identification/serial number mismatch (with preprogrammed information).

2. Communications Standards for the Transmittal of Data Files From Electronic On-Board Recorders (EOBRs)

2.1 EOBRs must produce and store RODS in accordance with the file format specified in this Appendix and must be capable of a one-way transfer of these records through wired and wireless methods to authorized safety officials upon request.

2.2 *Wired*. EOBRs must be capable of transferring RODS using the “Universal Serial Bus Specification (Revision 2.0) (incorporated by reference, *see* § 395.18). Each EOBR device must implement a single USB compliant interface featuring a Type B connector. The USB interface must implement the Mass Storage class (08h) for driverless operation.

2.3 *Wireless*. EOBRs must be capable of transferring RODS using one of the following wireless standards:

2.3.1 802.11g–2003 standard as defined in the 802.11–2007 base standard for wireless communication “IEEE Standard for Information Technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements: Part 11: Wireless LAN Medium

Access Control (MAC) and Physical Layer (PHY) Specifications” (IEEE Std. 802.11–2007) (incorporated by reference, *see* § 395.18).

2.3.2 Commercial Mobile Radio Services (e.g., cellular).

3. Certification of EOBRs To Assess Conformity With FMCSA Standards

3.1 The following outcome-based performance requirements must be included in the self-certification testing conducted by EOBR manufacturers:

3.1.1 Location

3.1.1.1 The location description for the duty status change must be sufficiently precise to enable enforcement personnel to quickly determine the vehicle's geographic location at each change of duty status on a standard map or road atlas.

3.1.1.2 When the CMV is in motion, location and time must be recorded at intervals of no greater than 60 minutes. This recorded information must be available for an audit of EOBR data, but is not required to be displayed on the EOBR's visual output device.

3.1.1.3 Location codes derived from satellite or terrestrial sources, or a

combination thereof must be used. The location codes must correspond, at minimum, to the GNIS maintained by the United States Geological Survey.

3.1.2 Distance traveled

3.1.2.1 Distance traveled may use units of miles or kilometers driving during each on-duty driving period and total for each 24-hour period for each driver operating the CMV.

3.1.2.2 If the EOBR records units of distance in kilometers, it must provide a means to display the equivalent distance in English units.

3.1.2.3 If the EOBR obtains distance-traveled information from a source internal to the CMV, the information must be accurate to the CMV's odometer.

3.1.3 Date and time

3.1.3.1 The date and time must be reported on the EOBR output record and display for each change of duty status and at such additional entries as specified under “Location.”

3.1.3.2 The date and time must be obtained, transmitted, and recorded in such a way that it cannot be altered by a motor carrier or driver.

3.1.3.3 The time must be coordinated to the Universal Time Clock (UTC) and must not drift more than 60 seconds per month.

3.1.4 File format and communication protocols: The EOBR must produce and transfer a RODS file in the format and communication methods specified in sections 1.0 and 2.0 of this Appendix.

3.1.5 Environment

3.1.5.1 Temperature—The EOBR must be able to operate in temperatures ranging from –40 degrees C to 85 degrees C.

3.1.5.2 Vibration and shock—The EOBR must meet industry standards for vibration stability and for preventing electrical shocks to device operators.

3.2 The EOBR and EOBR support systems must be certified by the manufacturer as evidence that their design has been sufficiently tested to meet the requirements of § 395.16 under the conditions in which they would be used.

3.3 The exterior faceplate of EOBRs must be marked by the manufacturer with the text 'USDOT–EOBR' as evidence that the device has been tested and certified as meeting the performance requirements of § 395.16.

PART 396—INSPECTION, REPAIR AND MAINTENANCE

■ 26. The authority citation for part 396 continues to read as follows:

Authority: 49 U.S.C. 31133, 31136, and 31502; and 49 CFR 1.73.

■ 27. Amend § 396.9 by revising the section heading, the heading of paragraph (c), and paragraph (c)(1) to read as follows:

§ 396.9 Inspection of motor vehicles in operation.

* * * * *

(c) *Motor vehicles declared "out of service."* (1) Authorized personnel shall declare and mark "out of service" any motor vehicle which by reason of its mechanical condition or loading would likely cause an accident or a breakdown. Authorized personnel may declare and mark "out of service" any motor vehicle not in compliance with § 385.811(d). An "Out of Service Vehicle" sticker shall be used to mark vehicles "out of service."

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Anne S. Ferro,

Administrator.

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