

Prepared Statement of
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Surface Transportation and Merchant Marine Infrastructure
Safety and Security
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Mr. Chairman and members of the Subcommittee, my name is Jerry Gabbard, and I am Vice President for Commercial Vehicles in the NAFTA region of Siemens VDO Automotive. On behalf of the Siemens VDO Automotive Corporation, I appreciate the opportunity to present our views on the use of electronic onboard recording devices.

Background of Siemens with Vehicle Safety Technologies

Siemens VDO is a leading international supplier of automotive electronics and mechatronics. Through the use of our products, such as airbags, ABS, or access control systems, both chassis and car-body safety is increased. As a development partner within the automobile industry, we manufacture a comprehensive spectrum of products relating to the drive-train, engine management electronics and fuel injection that simultaneously improve engine performance and reduce emissions. Driver comfort is enhanced and driving is made easier with information and car communication systems that include instrumentation, audio and navigation equipment, telematics, and multimedia applications, up to entire cockpit designs.

Globally, Siemens VDO supplies virtually all manufacturers of commercial vehicles with electronic on-board recorders and offers a variety of aftermarket solutions tailored to unique regional and national needs. There are more than 6 million of our on-board recorders installed in commercial vehicles throughout the world.

Our Company is committed to support Federal Motor Carrier Safety Administration's (FMCSA's) goal to improve commercial vehicle motor safety and the intention to introduce a practical rule on Electronic Onboard Recorders (EOBR) for Hours of Service (HOS) compliance. Over the past 35 years Siemens has learned from other world regions that EOBRs, universally used in all heavy commercial vehicles, have significant potential to contribute to improved compliance with HOS regulation, and therefore, reduce crashes related to driver fatigue.

Major Concerns with the Proposed FMCSA Rule on EOBRs

- Siemens VDO believes that the Notice of Proposed Rule Making (NPRM) on EOBR in its current form will not lead to increased installation and proper utilization of EOBR. We therefore predict no measurable impact on improved road safety and no contribution towards treating all carriers and drivers equitably and less driver exploitation.
- The Regulatory Impact Analyses (RIA) has used excessive EOBR cost estimates leading to inappropriate analyses.
- The rule does not mandate the universal installation of EOBRs, and the proposed incentives will not encourage carriers to install EOBR in significant quantities.
- The rule uses an inappropriate definition of "problem drivers" in regard to the reality of HOS compliance. Thus, the chances of detecting non-compliance given today's

minimal number of roadside checks makes meaningful road safety improvements highly unlikely.

- The rule does not require a tamperproof system design.
- The rule lacks standard specifications for driver identification and how drivers can move their HOS data from one vehicle to another.
- Data privacy concerns are not adequately considered.
- FMCSA has tried to balance different arguments in the Advanced Notice of Proposed Rule Making (ANPRM) but has failed to put safety first. The rule therefore fails to meet the minimum standards established by the Motor Carrier Safety Improvement Act of 1999 or the DC Court of Appeals dictate in the Public Citizen decision.

FMCSA has based its decision not to propose a universal mandate for an EOBR and to promote mobile devices mainly on the cost/benefit analyses of the Regulatory Impact Analyses of Electronic On-Board Recorders. Unfortunately, the Regulatory Impact Analysis (RIA), and therefore FMCSA, ignored submitted evidence about EOBR products now on the market that are inexpensive, tamper-resistant and standardized. There is a significant difference between the cost estimation for EOBR as stated in the RIA and the cost estimation of Siemens VDO and other potential vendors¹.

Detailed Criticism of the Underlying Regulatory Impact Analysis

- The full cost for today's fleet management systems has been used by FMCSA for the RIA, ignoring the fact that HOS function is only an add on component to the system. The primary reason to use the fleet management system (and therefore its main cost driver) is to enforce other company policies such as to monitor drivers' behavior, vehicle movement, and freight. The proposed performance specification for EOBR HOS recording adds only minimal costs to standard fleet management solutions (FMS). Those transport companies that buy and use FMS mainly for operational reasons, are likely to benefit from limited additional cost for electronic HOS recording and would recoup their investment costs in a very short period. However, this would place smaller fleets and owner operators at a competitive disadvantage.
- Costs for wireless data extraction are included in the annual operating cost. This is necessary for mobile phone solutions and is also normally part of fleet management concepts designed for big fleets in long haul operations. But this is not implicitly required for minimally compliant, tethered EOBR solutions, as they may use other means to transfer data to a secondary data back up system. In particular, owner-operators, small carriers, and those operating short range distributions do not benefit from wireless data extraction of HOS data. As only a limited number of power units do not return to the transport companies home location within the required time for downloading of HOS data to a secondary back up system, the EOBR rule must allow

¹ i.e. Report On Board

for data downloading without General Packet Radio Service (GPRS) or satellite communication.

- FMCSA is focusing on technical solutions available off-the-shelf today, but does not consider the technological possibilities for a minimally compliant and standardized EOBRs at current low cost.
- Cost savings from economies of scale (when universally mandating EOBR) and increased competition have not been considered by FMCSA.
- FMCSA assumes a useful lifetime of the EOBR of 3-5 years which might be correct when using mobile phones or fleet management systems but will certainly not be the case with minimally compliant and standardized EOBR. The Siemens solution, for example, has a market life of 10 years.
- With a universal mandate of EOBR, vehicle manufacturers are likely to offer the HOS functionality as an integral part of their vehicles. This will further reduce the cost for the device itself and its installation cost.
- Standardization will significantly reduce training cost for drivers, dispatchers and enforcers.

The need to introduce a practical EOBR rule

Thousands of people are killed every year on our roads in accidents in which trucks are involved. In addition, tens of thousands are severely injured. Anyone who has witnessed a large truck accident understands the extreme damage to life and property that can result.

Road traffic is increasing worldwide. The fact that safety on the roads has increased in most of the world's highly developed countries despite increasing traffic density is due to a wide range of measures ranging from improved infrastructure to safer vehicles and better training. Measures which encourage people to comply with speed and hours-of-service regulations are a key part of many of these regulatory systems.

Truck Crash Studies

Various truck crash studies have reached varying conclusions on the role of the driver but all conclude that driver fatigue is a significant factor.

We understand that some truck crash studies have assigned only 13% of the accidents to the fatigue of drivers (Large Truck Causation Study) while others conclude that fatigue was the probable or primary cause of more than 40% of the crashes². Other studies show significantly increased crash risk among drivers who have driven a long time rising by 50% after 4 hours driving and increasing by even 130% after more than 8 hours of driving time³.

² Transportation Research and Marketing – A Report on the Determination and Evaluation of Fatigue in Heavy Truck Accidents, 1985

³ TZUOO-DING LIN, PAUL P. JOVANIS, and CHUN-ZIN YANG, Time of Day Models of Motor Carrier Accident Risk

To determine if drivers are violating the HOS rules, various studies have been conducted. Observations of long distance trucking indicate that 30% to 50% are in violation of the HOS regulations⁴ whereas interviews of drivers indicate that more the 75% are at least partly violating the HOS rules.

It should also be noted that two-thirds of interviewed drivers stated that they had driven more miles than was recorded in their logbook during the past year⁵. In other words, Records of Duty Status (RODS) or electronic data records often do not reflect the reality about driving time. It is not only the paper log books which are easily tampered with but is also the case with many of the recording devices currently available in the U.S.

Data security, Data Privacy and Standardization Requirements

A key purpose of EORB is to achieve less tampering of HOS records than is presently the case and to allow for better enforcement. Ultimately, the HOS data recorded in the EOBR must be reliable enough that they could be accepted in court, if required.

This requires:

- 1) A technical and organizational concept which ensures that HOS data input reflects drivers' consecutive activities properly;
- 2) A technical solution which records, stores, and transmits data in a tamperproof way;
- 3) A means to allow enforcers to detect any manipulation attempt;
- 4) Standardized data access/download interfaces for enforcers and carriers; and
- 5) Data access routines ensuring that only HOS relevant data could be accessed by law enforcers.

The NPRM fails to address these requirements in the following ways:

- **Although the NPRM makes some suggestions for common protocols and file formats, EOBR systems from different vendors are unlikely to be interoperable with each other.**
- **The driver identification system and drivers' data transfer from one vehicle to another have not been specified and restricted to one technical solution. A consecutive HOS record for drivers using different vehicles is therefore highly unlikely.**

⁴ Beilock, R. and Capelle, R.B. "Economic Pressure, Long Distance Trucking and Safety", Journal of the Transportation Research Forum 28 (1987) 177-85

Hertz, R.P. "HOS Violations Among Tractor-Trailer Drivers" Accident Analyses and Prevention 23 (1991)
Elisa R. Braver et al., "Long Hours and Fatigue: A Survey of Tractor-Trailer Drivers" Journal of Public Health Policy 341 (1992)

⁵ Elisa R. Braver et al., "Long Hours and Fatigue: A Survey of Tractor-Trailer Drivers" Journal of Public Health Policy 353 (1992)

- The proposed possibility to use mobile EOBR solutions not tethered to the vehicle leaves the door wide open for falsification⁶.
- The EOBR security level has not been defined. Test and certification against common IT standards by independent laboratories are not required as they should be.

Unfortunately, devices currently available in the U.S. are not able to provide meaningful compliance, because those who want to cheat can easily do it using these devices. The proposed FMCSA EOBR rule is unlikely to change this. It can be expected that law enforcement will return to requiring supporting documents, as the proposed EOBR rule does not provide the confidence that the HOS data is accurate and dependable.

Thus, we believe the proposed EOBR FMCSA rule will make little or no difference in improving the road safety and driving habits of drivers who frequently violate the HOS regulation.

Findings and Conclusions:

There is a widespread agreement that driver fatigue is a significant contributor to accidents and excessive driving times are a major contributor to driver fatigue. Professional drivers are likely to drive routinely for many hours and this behavior is often due to self-imposed economic pressure or other competitive pressures. These and other factors often encourage drivers to ignore HOS requirements.

Responsible managers of transport companies are aware and well informed about the link between driving time and accident risk. Several leading transport companies have given a favorable opinion on a mandated EOBR system, because they understand that both they and society benefit from EOBR deployment.

Based on our 35 years of experience around the world with legally required systems for recording of drivers' hours of service, we are fully convinced that these systems do have the strong potential to significantly reduce accidents that would otherwise be caused by fatigued drivers violating the rules and will contribute to harmonized competitive conditions and perhaps foster an environment that minimizes driver exploitation.

However, we have also learned that EOBR systems only achieve their full potential for improved road safety at a low cost if the technical concept of the EOBR system, its infrastructure and enforcement, are tailored for this specific needs and goals of the region in which they are being considered.

⁶ Mobile EOBR can record proper HOS data, but only if the driver wants data to be recorded properly.

We believe that the proposed FMCSA rulemaking on EOBR for HOS compliance in its current form fails to meet these requirements and does not serve the public interest to reduce accidents caused by fatigued drivers, nor will it significantly contribute to any significant cost savings to the trucking industry.

The Regulatory Impact Analysis of Electronic On-Board Recorders⁷ has failed to adequately collect and analyze information about cost reduction potential for EOBR systems for HOS recording in a universally mandated market and ignored submitted evidence about the existence of inexpensive tamperproof electronic onboard recorders. The conclusions of FMCSA in the NPRM regarding the cost/benefit analysis are therefore fundamentally flawed.

Low cost EOBRs are possible, especially for owner-operators or other companies that do not need the sophisticated functionality of fleet management systems. Dedicated EOBR for HOS recording could be available at low annual total cost if EOBRs are universally mandated by FMCSA.

Due to the lack of a universal mandate, existing and potential new vendors of EOBR systems can not expect any reasonable market for a low cost EOBR. Therefore, costs for an EOBR unit including ongoing operating cost will remain high.

Carriers are not homogenous and have different needs. Whereas some fleets benefit from using sophisticated fleet management systems others do not. It is likely that the majority of carriers will accept EOBRs, but only if their concerns about cost, data privacy, and competitive disadvantages are considered in the manner in which is mandated.

Under the proposed rule, the U.S. is unlikely to see significant numbers of EOBR systems installed and properly used by those drivers referred to as heavy violators, as they are simply not going to be apprehended by law enforcement.

Public safety will not be enhanced without a universal EOBR mandate.

The use of mobile solutions, not permanently installed in the vehicle, allows for ease of use but also allows easy manipulation of driving status. Those systems are perfect for drivers who will comply and demonstrate HOS compliance, but useless for enforcement if used by drivers willing to cheat.

The proposed EOBR performance standard proposed in the rule with its inherent possibility to falsify EOBR data records at all levels, will not improve the integrity of the

⁷ RIA prepared by ICF Consulting, Inc. for the FMCSA Analyses Division, November 2006

recorded data over manual RODS. Additionally, law enforcement will not have an enhanced tool to detect falsifications.

It is highly likely under the proposed rule that any EOBR data will largely be ignored by state and local law enforcement official, as they will soon discover the shortcomings. Therefore, it is also unlikely to result in any reduction in the need for supporting documents.

Summary of Siemens VDO Recommendations:

- The NPRM should be cancelled and replaced by a new NPRM.
- The RIA must be reworked in order to take into consideration the existence of low cost EOBR devices.
- The NPRM must standardize the level of measures to prevent tampering with the overall system; it should standardize user interfaces with respect to driver identification and how drivers' data are transferred from one vehicle to another; and it should define file formats and download protocols.
- The final EOBR rule should require systems to be fixed to the vehicle and not allow mobile solutions.
- As surveys show clearly that HOS violations are much more widespread than what FMCSA is assuming, a widespread mandate should be proposed.
- A phase-in scenario for tamperproof EOBR and phase out for old systems should be developed.
- FMCSA should facilitate the introduction of EOBRs by sharing the most current and correct information on them with carriers and drivers.
- The decision to universally mandate EOBRs should be made with realistic figures and also in the light of the primary goal which is to improve road safety.

I appreciate this opportunity to offer these observations, experiences, and recommendations to improve highway safety in the United States.