



**DEPARTMENT OF TRANSPORTATION**

**4910-EX-P**

**Federal Motor Carrier Safety Administration**

**[Docket No. FMCSA 2012-0074]**

**Improvements to the Compliance, Safety, Accountability (CSA) Motor Carrier Safety Measurement System (SMS)**

**AGENCY: Federal Motor Carrier Safety Administration (FMCSA)**

**ACTION:** Notice; request for public comment.

**SUMMARY:** FMCSA announces planned improvements to the Carrier Safety Measurement System (SMS) which was implemented in December 2010 as part of the Agency's broader Compliance, Safety, Accountability (CSA) initiative. A preview of these improvements will be available to motor carriers and law enforcement on March 27, 2012. The system changes are scheduled to be available to the public in July 2012. There will be additional opportunity for public comment on the changes after the preview period ends in July 2012.

The improvements to SMS announced in this notice are based on ongoing analysis and feedback from enforcement personnel, the motor carrier industry, and other stakeholders. The changes more effectively identify and prioritize high-risk and other unsafe motor carriers for enforcement interventions designed to reduce commercial motor vehicle crashes and hazardous materials incidents.

Starting on March 27, 2012, FMCSA will provide motor carriers with the ability to preview how the improvements impact their individual safety data in SMS. These improvements include: (1) changes to the SMS methodology that identify higher risk carriers while addressing industry biases; (2) better applications of SMS results for Agency interventions by more accurately identifying safety sensitive carriers (i.e.,

carriers transporting people and carriers hauling hazardous materials (HM)), so that such firms can be selected for CSA interventions at more stringent levels; and, (3) more specific fact-based displays of SMS results on the SMS Web site.

The data preview may be found at <http://csa.fmcsa.dot.gov/>. During the data preview period, the Agency requests comments on the impacts of the changes.

**DATES:** Comments must be received on or before [INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER.]

**ADDRESSES:** You may submit comments identified by Federal Docket Management System Number FMCSA-2012-0074 by any of the following methods:

- Federal eRulemaking Portal: [http:// www.regulations.gov](http://www.regulations.gov). Follow the online instructions for submitting comments.
- Fax: 1- 202-493-2251.
- Mail: Docket Management Facility, (M-30), U.S. Department of Transportation (DOT), 1200 New Jersey Avenue, SE, West Building, Ground Floor, Room 12-140, Washington, DC 20590-0001.
- Hand Delivery: Same as mail address above, between 9 a.m. and 5 p.m., ET, Monday through Friday, except Federal holidays. The telephone number is 202-366-9329.

To avoid duplication, please use only one of these four methods. All submissions must include the Agency name and docket number for this notice. See the “Public Participation” heading below for instructions on submitting comments and additional information.

Note that all comments received, including any personal information provided, will be posted without change to <http://www.regulations.gov>. Please see the “Privacy Act” heading below.

Docket: For access to the docket to read background documents or comments received, go to <http://www.regulations.gov> at any time or to Room W12-140 on the ground floor of the DOT Headquarters Building at 1200 New Jersey Avenue, SE, Washington, DC, 20590, between 9 a.m. and 5 p.m., ET, Monday through Friday, except Federal holidays.

Privacy Act: Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT’s Privacy Act System of Records Notice for the DOT Federal Docket Management System published in the Federal Register on January 17, 2008 (73 FR 3316), or you may visit <http://edocket.access.gpo.gov/2008/pdf/E8-785.pdf>.

Public Participation: The <http://www.regulations.gov> website is generally available 24 hours each day, 365 days each year. You can get electronic submission and retrieval help and guidelines under the “help” section of the <http://www.regulations.gov> website. Comments received after the comment closing date will be included in the docket, and will be considered to the extent practicable.

**FOR FURTHER INFORMATION CONTACT:** Mr. Bryan Price, Federal Motor Carrier Safety Administration, 1000 Liberty Avenue, Suite 1300, Pittsburgh, PA 15222, Telephone 412-395-4816, E-Mail: [bryan.price@dot.gov](mailto:bryan.price@dot.gov)

**SUPPLEMENTARY INFORMATION:**

In December 2010, FMCSA implemented SMS to identify high-risk motor carriers for on-site investigations consistent with Section 4138 of the Safe, Accountable, Flexible, Efficient, Transportation Equity Act, and Pub. L. 109-59 (Aug.10, 2005) (SAFETEA-LU).

SMS is also used to identify and prioritize motor carriers for less resource intensive interventions, such as automated warning letters, and serves as a principal factor in roadside inspection software designed to recommend motor carriers with known performance and compliance problems for additional inspections. Furthermore, SMS now provides motor carriers and other safety stakeholders with regularly updated safety performance data available through the public website <http://ai.fmcsa.dot.gov/SMS>.

Select intervention efficiency and effectiveness concepts from the intervention component of the CSA model were also implemented nationally in December 2010.

These concepts include:

1. Automated Warning Letters;
2. Focused Compliance Reviews;
3. Direct Notices of Violation (NOV);
4. Investigation of Red Flag Driver Violations during all Compliance Reviews; and
5. Selection of drivers for examination during carrier investigations based on an internal selection system (the Driver Safety Management System).

Elements of the CSA model that remain to be implemented in future phases include more comprehensive implementation of the full suite of CSA interventions (e.g., off-site investigations and cooperative safety plans (CSPs)) and the Notice of Proposed

Rulemaking (NPRM) recommending an improved approach to safety fitness determinations of motor carriers.

The Agency also uses this notice to discuss its evaluation of crash weighting in SMS. FMCSA is looking at various options within SMS to identify carriers that have the greatest risk of future crashes. As part of this effort, FMCSA has been looking at methods for determining crash preventability and accountability, and how crashes would be weighted in SMS. The increased weighting would identify carriers that are causing crashes, and prioritize them for intervention. In researching this issue, FMCSA identified several areas where additional data and further study are needed before moving forward with a proposal on the weighting of crashes in SMS. These areas include evaluating the uniformity and consistency of police accident reports; determining a process for assessing crashes in a uniform and consistent manner; creating a process for accepting public input into the process; and determining the actual effect on SMS's ability to identify carriers that have a high risk of crashes. As a result, the Agency is conducting additional research and analysis to determine the feasibility of different weighting for crashes in SMS based on an objective set of criteria.

### **Safety Measurement System**

SMS quantifies the safety performance of motor carriers using data available in FMCSA's motor carrier database, the Motor Carrier Management Information System (MCMIS). This database includes violations found during roadside inspections, traffic enforcement, and the intervention process. SMS currently groups these data into seven Behavioral Analysis Safety Improvement Categories (BASICs): Unsafe Driving, Fatigued Driving (Hours-of-Service), Driver Fitness, Controlled Substances and Alcohol,

Vehicle Maintenance, Cargo Related, and Crash History. For further detailed information on the current structure of SMS, see the SMS Methodology at <http://csa.fmcsa.dot.gov>.

SMS currently has sufficient data to assess the safety performance of approximately 200,000 of the 525,000 active interstate and intrastate HM motor carriers in FMCSA's census files (approximately 38 percent). FMCSA's analysis showed that the 200,000 carriers assessed in the March 2011 run of SMS were involved in over 90% of the crashes reported to FMCSA from April to June 2011. Of those 200,000 carriers, over 50,000 exceeded the intervention threshold in at least one BASIC and were identified for Agency interventions. Additionally, these 50,000 carriers (approximately 10 percent of the total active population) were responsible for 45% percent of the recorded crashes. FMCSA's analysis, therefore, found very strong associations between future crash risk and high percentiles in the Unsafe Driving, Fatigued Driving (Hours of Service), and Crash BASICs of SMS.

Independent evaluation of SMS data by the University of Michigan Transportation Research Institute (UMTRI) determined that crash rates were higher for motor carriers identified with safety problems in SMS's seven BASICs. In particular, UMTRI found that motor carriers falling above FMCSA's intervention threshold in the Unsafe Driving BASIC had crash rates that were more than three times greater than the crash rate for motor carriers without any BASICs above FMCSA's intervention threshold. Similarly, UMTRI found that the crash rate for motor carriers above FMCSA's intervention threshold in the Fatigued Driving (Hours of Service) BASIC was nearly three times greater than the crash rate for motor carriers without any BASICs

above FMCSA's intervention threshold. Details on the full UMTRI report can be found at <http://csa.fmcsa.dot.gov/about/UMTRI.aspx>.

From the start of CSA, FMCSA expected to modify SMS as new data and additional analyses became available. To date, FMCSA has made a number of enhancements to SMS based on feedback from State partners, industry, and safety advocates.

Moving forward, FMCSA plans to apply a systematic approach to making improvements to SMS, prioritizing and releasing packages of improvements as needed, and providing an SMS preview period for law enforcement and motor carriers prior to implementation. These improvements are the Agency's response to findings from its ongoing analyses of data, input from law enforcement, the motor carrier industry, and other safety stakeholders. This package of SMS enhancements includes:

1. Strengthening the Vehicle Maintenance BASIC by moving cargo/load securement violations from the Cargo-Related BASIC to the Vehicle Maintenance BASIC;
2. Simultaneously renaming the Cargo-Related BASIC the HM BASIC, which will better identify HM-related safety problems and change how HM carriers are classified to allow for increased intervention scrutiny;
3. Better aligning SMS with Intermodal Equipment Provider (IEP) regulations;
4. Aligning violations that are included in SMS with the Commercial Vehicle Safety Alliance (CVSA) inspection levels by eliminating the vehicle violations derived from driver-only inspections and driver violations from vehicle-only inspections;
5. Improving the identification of passenger carriers; and
6. Modifying the SMS website display to:

- a. Change current terminology, including the terms “Insufficient Data” and “Inconclusive,” to fact-based definitions that clarify the carrier’s status in each BASIC;
- b. Distinguish between crashes with injuries and crashes with fatalities.

Individual motor carriers will have an opportunity to preview their performance data so that they can determine the impact of SMS improvements on their company’s information in advance of the public release. The Agency also seeks comments on the impacts of these changes. To view their company’s data, motor carriers will have to enter their Personal Identification Number (PIN). Motor carriers that do not have a PIN, or those that have forgotten their PIN, can go to the following web address for assistance: [https://li-public.fmcsa.dot.gov/LIVIEW/PKG\\_PIN\\_START.PRC\\_INTRO](https://li-public.fmcsa.dot.gov/LIVIEW/PKG_PIN_START.PRC_INTRO).

Following the preview period, FMCSA may further refine the new methodology before implementation and release of the revised SMS results to the public. The Agency addresses each of these improvements in turn below.

### **Incorporate Cargo/Load Securement Violations into the Vehicle Maintenance BASIC**

Motor carrier industry and enforcement stakeholders have noted that motor carriers predominantly operating open deck trailers (e.g., flatbeds) have significantly higher Cargo-Related BASIC percentiles than those for other groups of operators, because load securement issues for these types of carriers are more readily apparent during roadside inspections. Based on this potential bias, FMCSA has not made the Cargo-Related BASIC performance data available to the public.

While cargo/load securement violations comprise 82% of violations recorded in the Cargo-Related BASIC, they comprise just 4% of violations when included in the Vehicle Maintenance BASIC. FMCSA compared the flatbed bias of the current Cargo-Related BASIC with a modified Vehicle Maintenance BASIC. The analysis determined that while the Cargo-Related BASIC identified 66% of flatbed carriers (as identified by industry and FMCSA field staff) as above the intervention threshold in that BASIC, the modified Vehicle Maintenance BASIC identified only 21% of these carriers as above the intervention threshold. FMCSA also examined the carriers identified above the intervention threshold (i.e., those in the 80<sup>th</sup> percentile) in the current Cargo-Related and Vehicle Maintenance BASICs and compared them to carriers identified under the proposed new Vehicle Maintenance BASIC. Carriers identified under the new Vehicle Maintenance BASIC had over a 20% higher crash rate. The analysis showed that this approach (1) identifies carriers with a higher crash risk for Agency interventions and (2) effectively addresses the bias associated with carriers that haul open trailers while still holding all carriers accountable for all cargo securement violations.

**Change the Cargo-Related BASIC to the HM BASIC and change how HM carriers are identified**

The presence of HM can greatly exacerbate the consequences of crashes and cargo spills. Because the current Cargo-Related BASIC includes both HM violations and load securement violations, some motor carriers with HM compliance issues do not rise above the FMCSA's intervention threshold due to the relative weight of general cargo securement violations.

FMCSA consulted with enforcement subject matter experts to identify and apply severity weightings to the 239 HM violations contained in the Cargo-Related BASIC and

112 additional HM safety-based violations attributable to the motor carrier. The Agency then conducted effectiveness testing to compare the Cargo-Related BASIC with a new BASIC for carriers transporting HM requiring placards to determine which configuration better identified carriers with a high risk of future HM safety violations. The analysis found that the new HM BASIC better identified carriers that would commit future HM violations than the current Cargo-Related BASIC.

In addition, FMCSA plans to change how carriers are classified as HM carriers to allow increased intervention scrutiny. In August 2011, the criteria for identifying carriers subject to the more stringent HM intervention thresholds were changed to any carrier with HM activity (i.e., a placarded HM inspection, review, or permit) in the past two years rather than identifying carriers based on the HM commodities noted on the MCS-150 registration form. Under these criteria, it was determined that some carriers inadvertently transport placarded HM loads or that an extremely small percentage of their loads involved placarded HM. FMCSA conducted an analysis to establish new criteria for excluding carriers that transport HM as a minimal part of their business. These criteria took two forms: (1) requiring HM activity within the last 24 months, excluding carriers that have not transported HM in over a year, and (2) requiring that placardable HM inspections constitute a sizable proportion of the carrier's total inspections. This change resulted in exclusion of approximately 11,500 of the 24,000 carriers currently subject to HM thresholds, while still encompassing 94% of the placardable HM inspections recorded in the past 24 months.

FMCSA is applying the new criteria to focus intervention resources on carriers involved in the transportation of HM requiring placards. For a carrier to be subject to the

HM threshold, that carrier must have at least two inspections on a vehicle transporting HM requiring placards, within the past 24 months, with one inspection occurring within the past 12 months, and making up at least five percent of the motor carrier's total inspections. In addition, any motor carrier that has an FMCSA HM safety permit or that has been identified as a carrier of placarded quantities of HM from an investigation in the last 24 months will be subject to the increased intervention scrutiny.

The methodology applies a more stringent intervention threshold for these carriers transporting HM. The Agency created a new HM BASIC that includes only HM-related violations and inspections on carriers involved in the transportation of HM requiring placards. This change allows the Agency to better identify HM-related safety issues for CSA interventions.

#### **Apply Carrier-based Violations on Intermodal Equipment Provider (IEP) Trailers to the Vehicle BASIC**

Currently, SMS does not include any roadside violations on an intermodal chassis when there is an associated IEP. FMCSA chose not to include these violations in the first versions of SMS because FMCSA was still in the process of identifying those violations attributable to the motor carrier and those attributable to the IEP. Section 390.44 of title 49, Code of Federal Regulations, states that an IEP will not be held responsible for such violations because a motor carrier indicated pursuant to 49 CFR § 392.7(b) that the chassis components, parts, or accessories had no safety defects at the time of the pre-trip inspection. Because of this, some of the violations found during a roadside inspection will be the responsibility of the motor carrier. For example, when an IEP interchanges a chassis with a motor carrier, the driver is required under 49 CFR § 392.7(b) to conduct a

pre-trip inspection to determine if that chassis is in good working order. If defects are found during the pre-trip inspection, the driver has the opportunity to alert the IEP of such defects. The IEP, in turn, is required to either repair the defect or replace the equipment prior to the driver's departure. Violations that should have been detected during a pre-trip inspection but are later found during a roadside inspection become the responsibility of the motor carrier and thus should be applied in SMS.

FMCSA worked collaboratively with law enforcement officials and industry personnel, both on the motor carrier and IEP sides, to identify the violations that could reasonably be found during a pre-trip inspection of an IEP chassis. A copy of the violation attribution decision process and associated violations can be found on our web site at [www.fmcsa.dot.gov/documents/rulesregs/IEP/Visio-Violation-Attribution-07182011\\_508.pdf](http://www.fmcsa.dot.gov/documents/rulesregs/IEP/Visio-Violation-Attribution-07182011_508.pdf).

In cases where (1) the driver conducted a pre-trip inspection, and (2) the violation is considered pre-trip detectable, the violation is attributed to the motor carrier. FMCSA applied this rule to the past 24 months of roadside inspections, resulting in approximately 22,000 violations included in the SMS Vehicle Maintenance BASIC.

**Eliminate vehicle violations from “driver-only” inspections and driver violations from “vehicle-only” inspections**

Currently, SMS includes Level 3 (Driver-Only) inspections in the Vehicle Maintenance BASIC only when vehicle violations are noted on the inspection report. Industry and enforcement personnel expressed concern that many vehicle violations fall outside the scope of the inspection and could bias the Vehicle Maintenance BASIC data. This bias is created by the fact that driver-only inspections count against the Vehicle BASIC assessments when vehicle violations are documented but do not count as a clean

inspection toward the Vehicle BASIC when vehicle violations are not noted. Moreover, CVSA policy is that items not indicated in the inspection procedure for a particular level inspection, for example, a Level 3 (Driver-Only) inspection, should not be included on the inspection report.

FMCSA is therefore removing vehicle violations found during driver-only inspections and driver violations found during vehicle-only inspections to bring SMS into alignment with existing CVSA policies regarding protocol for different inspection levels.

FMCSA evaluated the extent to which inspectors are citing vehicle violations during driver-only inspections to confirm that this problem merits the attention that stakeholders have suggested. Approximately 139,000 violations, or 2.6 percent of all vehicle violations used in SMS, are vehicle violations cited during a driver-only inspection. While very few driver violations are ever documented in vehicle-only inspections, this change will also be made to ensure that only violations within the scope of a particular type of inspection are included in SMS.

When a vehicle violation is discovered during a Level 3 inspection, FMCSA strongly encourages the roadside inspector to convert the inspection to a Level 2 inspection where documentation of vehicle violations is appropriate. If the roadside inspector is not certified to conduct Level 2 inspections, the roadside inspector can still address the unsafe condition through State citations or warnings.

**Identify motor carriers transporting passengers and apply a more stringent passenger carrier intervention threshold**

Motor carriers subject to the passenger carrier intervention threshold in SMS are held to a significantly higher standard than non-passenger carriers. Enforcement

stakeholders support updating the definition of passenger carrier within SMS to better focus FMCSA resources on carriers involved in passenger transportation.

FMCSA is revising the definition of carriers subject to the lower passenger carrier intervention thresholds within SMS. The new criteria add all for-hire carriers that operate 9-15 passenger capacity vehicles and private carriers that operate 16-plus passenger capacity vehicles, as these carriers are under FMCSA's authority. The new criteria exclude carriers that operate only 1-8 passenger capacity vehicles and private carriers that operate only 1-15 passenger capacity vehicles (effectively removing many carriers operating limousines, vans, taxis, etc.), as operation of these vehicles is generally outside most of FMCSA's regulations. The new criteria also remove carriers where less than 2% of their respective fleets are passenger vehicles, in order to exclude carriers that do not haul passengers as a significant part of their business. FMCSA determined how many carriers would be subject to the passenger carrier intervention threshold under these new criteria. This change would remove 4,200 carriers, while adding 5,700 carriers.

**Eliminate the use of the terms “Inconclusive” and “Insufficient Data” and Distinguish Crash Data**

Since April 2010, the BASIC summary on SMS online (<http://ai.fmcsa.dot.gov/sms>) has used the term “inconclusive,” to describe carriers that have enough inspections to be assessed but too few violations to warrant being considered for FMCSA interventions, and the term “insufficient data” to describe carriers that do not have enough inspections to produce a robust measure to even be assessed. Stakeholders have asked FMCSA to offer more specific fact-based descriptions, as the terms “inconclusive” and “insufficient data” are perceived to be difficult to understand.

FMCSA is providing a preview of the new terminology and the approach to presenting the crash data. The Agency encourages carriers to give feedback on the new terms before they are implemented publicly. For example, rather than displaying “insufficient data,” the site will display a fact-based description such as “< than 5 inspections,” and rather than displaying “inconclusive,” the site will contain a description such as “no violations within 1 year.”

Also, in the “Summary of Activities” section of a motor carrier’s information on SMS Online, FMCSA displays a count of recordable crashes broken into “fatality/injury” and “tow- away.” In response to stakeholder requests, FMCSA is separating the combined fatality/injury category into distinct categories: fatality, injury, and tow-away crashes.

### **Implementation**

As of the publication of this notice, motor carriers will be able to preview how these changes will affect their data and SMS results. During the SMS preview, motor carriers will have the opportunity to review the accuracy of SMS data, provide feedback, and if necessary, take action to improve their safety performance. During the March 2012 SMS Preview, motor carriers should:

- View their operational information to determine if they are now subject to placardable HM or passenger carrier intervention thresholds.
- View the new HM BASIC to review applicable violations.
- View the Vehicle Maintenance BASIC to determine how cargo/load securement violations previously recorded in the Cargo-Related BASIC impact

their Vehicle Maintenance percentiles, and to see which IEP-related violations have been recorded.

- Verify that vehicle violations found during driver-only inspections and driver violations found during vehicle-only inspections have been removed from their Vehicle Maintenance BASIC data.
- Review alternative terminology for “insufficient data” and “inconclusive” in the BASIC summary.
- View the “Summary of Activities” section of SMS Online to see new the breakout between injury crashes and fatal crashes.

FMCSA will collect, assess, and address feedback during the SMS Preview, and may further refine the enhancements prior to public implementation in July 2012.

#### Request for Comments

FMCSA requests comments on the above improvements to SMS. Commenters are requested to provide supporting data wherever appropriate.

Issued on: March 22, 2012

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