



DEPARTMENT OF TRANSPORTATION

[4910-EX-P]

Federal Motor Carrier Safety Administration

[Docket No. FMCSA-2014-0177]

Crash Weighting Analysis

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

ACTION: Notice; response to public comments.

SUMMARY: On January 23, 2015, FMCSA announced the results of the Agency's study on the feasibility of using a motor carrier's role in crashes in the assessment of the company's safety. This study assessed (1) whether Police Accident Reports (PARs) provide sufficient, consistent, and reliable information to support crash weighting determinations; (2) whether a crash weighting determination process would offer an even stronger predictor of crash risk than overall crash involvement and how crash weighting would be implemented in the Agency's Safety Measurement System (SMS); and (3) how FMCSA might manage a process for making crash weighting determinations, including the acceptance of public input.

Based on the feedback received in response to the January 23, 2015, Federal Register notice, FMCSA conducted additional analysis to improve the effectiveness of the Crash Indicator Behavior Analysis and Safety Improvement Category (BASIC). In addition, the Agency will develop and implement a demonstration program to determine the efficacy of a program to conduct preventability determinations on certain types of crashes that generally are less complex.

ADDRESSES: Docket: For access to the docket to read background documents or comments, go to www.regulations.gov at any time or visit Room W12-140 on the ground level of the West Building, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., ET, Monday through Friday, except Federal holidays. The on-line Federal document management system is available 24 hours each day, 365 days each year. If you want acknowledgment that we received your comments, please include a self-addressed, stamped envelope or postcard or print the acknowledgement page that appears after submitting comments on-line.

Privacy Act: In accordance with 5 U.S.C. 553(c), DOT solicits comments from the public to better inform its rulemaking process. DOT posts these comments, without edit, including any personal information the commenter provides, to www.regulations.gov, as described in the system of records notice (DOT/ALL-14 FDMS), which can be reviewed at www.dot.gov/privacy.

FOR FURTHER INFORMATION CONTACT: For information contact Mr. Catterson Oh, Compliance Division, Federal Motor Carrier Safety Administration, 1200 New Jersey Avenue SE., Washington, DC 20590, Telephone 202-366-2247 or by email: Catterson.Oh@dot.gov. If you have questions on viewing or submitting material to the docket, contact Docket Operations, telephone (202) 366-9826.

SUPPLEMENTARY INFORMATION:

I. Background

The Compliance, Safety, Accountability (CSA) program is FMCSA's enforcement model that allows the Agency and its State partners to identify and address motor carrier safety problems before crashes occur. The Agency's SMS quantifies the on-

road safety performance of motor carriers to prioritize enforcement resources. FMCSA first announced the implementation of the SMS in the Federal Register on April 9, 2010 (75 FR 18256) (Docket No. FMCSA-2004-18898). Violations are sorted into BASICS, which include a Crash Indicator BASIC.

Since its implementation in 2010, the SMS has used recordable crash records involving commercial motor vehicles (CMVs) that are submitted by the States through the Agency's Motor Carrier Management Information System, in addition to compliance and safety performance in other BASICS, to prioritize carriers for safety interventions. The Agency uses the definition of "accident" in 49 CFR 390.5, which means an occurrence involving a CMV operating on a highway in interstate or intrastate commerce that results in: (i) a fatality; (ii) bodily injury to a person who, as a result of the injury, immediately receives medical treatment away from the scene of the accident; or (iii) one or more motor vehicles incurring disabling damage as a result of the accident, requiring the motor vehicle(s) to be transported away from the scene by a tow truck or other motor vehicle. The term accident does not include an occurrence involving only boarding and alighting from a stationary motor vehicle; or an occurrence involving only the loading or unloading of cargo.

The crash data reported to FMCSA by the States does not specify a motor carrier's role in the crash or whether the crash was preventable. The Crash Indicator BASIC weights crashes based on crash severity, with more weight given to fatality and injury crashes than those that resulted in a vehicle being towed from the scene with no injuries or fatalities. While the public SMS website provides information on the recordable crashes of motor carriers, the percentile created by the system is not and has never been

publicly available. The Crash Indicator BASIC percentiles are available only to motor carriers who log in to view their own data, as well as to Agency and law enforcement users.

In addition, Section 5223 of the Fixing America's Surface Transportation, Pub. L. 114-94 (FAST) Act prohibits the Agency from making available to the general public information regarding crashes in which a determination is made that the motor carrier or the commercial motor vehicle driver is not at fault.

Research on the issue of crash preventability conducted by FMCSA, as well as independent organizations, has demonstrated that crash involvement, regardless of role in the crash, is a strong indicator of future crash risk. FMCSA's recently completed SMS Effectiveness Test shows that, as a group, motor carriers with high percentiles in the Crash Indicator BASIC have crash rates that are 85 percent higher than the national average.

(https://csa.fmcsa.dot.gov/Documents/CSMS_Effectiveness_Test_Final_Report.pdf).

This document and related reports are available in the docket of this notice.

Stakeholders have expressed concern that the Crash Indicator BASIC may not identify the highest risk motor carriers for intervention because it includes all crashes without regard to the preventability of the crash. In addition, some industry representatives have advised that while the Crash Indicator BASIC percentile is not publicly available, some customers are requiring motor carriers to disclose this information before committing to a contract.

In an attempt to identify a methodology and process for conducting preventability reviews, FMCSA completed a study on the feasibility of using a motor carrier's role in crashes as an indicator of future crash risk. The analysis focused only on the three broad questions below addressing the procedural issues surrounding a crash weighting program and the feasibility of implementing such a program; it did not focus on any other implications of the program. The three questions were separately designed and analyzed to inform Agency decisions.

1. Do PARs provide sufficient, consistent, and reliable information to support crash weighting determinations?
2. Would a crash weighting determination process offer an even stronger predictor of crash risk than overall crash involvement, and how would crash weighting be implemented in the SMS?
3. Depending upon the analysis results for the questions above, how might FMCSA manage the process for making crash weighting determinations, including public input to the process?

The Agency's research plan was posted on the Agency's website on July 23, 2012, at http://csa.fmcsa.dot.gov/documents/CrashWeightingResearchPlan_7-2012.pdf. The resulting report is titled "Crash Weighting Analysis" and is in the docket associated with this notice. The draft research was peer reviewed, and the peer review recommendations are also in the docket.

II. Summary of Comments

FMCSA received 54 docket submissions in response to the January 23, 2015 (80 FR 3719) notice. The commenters represented motor carriers, drivers, industry associations, safety advocates, and State enforcement partners. The comments focused on: (1) the impacts of the SMS information, (2) methodology changes needed in SMS, and (3) the preventability determination process.

A. Impacts of SMS Information

There was a majority opinion from the commenters that the establishment and use of a Crash Indicator BASIC percentile without consideration of crash preventability has been detrimental to motor carriers. Even though this percentile is not publicly available - it is only available to the Agency, law enforcement, and motor carriers who log into the FMCSA's Portal to view their own data - commenters expressed concern that the percentile is inaccurate, unfair, and negatively impacts their businesses. Even though the Crash Indicator BASIC percentiles are not publicly available, the American Moving and Storage Association (AMSA) and the Minnesota Trucking Association (MTA) advised that shippers are requiring motor carriers to show their percentiles before contracting with them. Industry representatives indicated that the percentiles are inaccurate because non-preventable crashes are included and, therefore, the percentiles portray motor carriers as unsafe even when their drivers or vehicles did not cause a crash.

Safety advocates, including Road Safe America, Truck Safety Coalition, and Advocates for Highway and Auto Safety (Advocates), supported keeping all crashes in the SMS system. These groups advised that using all crashes best predicts future crash risk and that the public should have access to all of the crash data.

FMCSA Response:

As FMCSA has indicated previously, the SMS is a prioritization tool for the Agency and its law enforcement partners. The Agency's Crash Indicator BASIC percentiles have never been in the public view because FMCSA recognized the Crash Indicator BASIC did not factor in preventability.

As discussed in this notice, as well as a separate notice published today in the Federal Register, FMCSA is proposing a demonstration program in which certain types of non-preventable crashes would be removed from the SMS.

FMCSA's SMS Effectiveness Test, discussed above, supports the Agency's continued use of the Crash Indicator BASIC for its own resource prioritization during the analysis period. The Agency notes that crashes will not affect a motor carrier's safety rating unless the carrier's role in the crashes is considered first.

B. Methodology Changes

Crash Definition

Tim Watson recommended that the Agency change the recordable crash definition to eliminate tow-aways. Mr. Watson contended that the Agency's focus should be on fatal and injury crashes and that, often, the damage requiring a tow is not severe. It is his opinion that focusing on the fatal and injury crashes would be more manageable and cost-effective for FMCSA.

FMCSA Response:

Revising the definition of recordable crash would be a change to the regulatory text that is beyond the scope of this notice. However, FMCSA conducted additional analysis to determine how removing tow-away crashes from the Crash Indicator BASIC

would impact its effectiveness in identifying high risk carriers. A report including this analysis titled “Crash Indicator BASIC Scenario Analysis” has been added to this docket. This report suggests that removing tow-away crashes from the Crash Indicator BASIC would not improve the effectiveness of this BASIC and would significantly reduce the Agency’s ability to identify and intervene with high-risk carriers. Removing tow-away crashes would result in a lower overall crash rate (5.99 crashes per 100 power units [PUs]) than the current Crash Indicator BASIC (6.34 crashes per 100 PUs), which suggests that it is not as effective at identifying high crash risk carriers. The number of crashes for this scenario is much lower than the number of crashes for the current Crash Indicator BASIC (10,854 vs. 15,638 crashes). Changes in size demographics show that under this scenario the smallest group of carriers, those with 1-5 power units, totals 286 compared to 1,379 carriers over Intervention Threshold in the current Crash Indicator BASIC. This is a 79 percent reduction in the number of carriers over the Intervention Threshold. Therefore, the Agency would have fewer opportunities to intervene through warning letters or other contact to potentially reduce crashes.

Weighting of Fatal and Injury Crashes

The American Bus Association (ABA) and National School Transportation Association (NSTA) presented a different perspective. These groups contended that the extra weighting of fatal and injury crashes has greater, and inappropriate, impacts on the passenger carrier sectors of the industry. Because of the volume of passengers, there is rarely a crash involving a bus that does not result in at least one injury. As a result, extra weighting on these crashes would automatically raise the Crash Indicator BASIC percentiles for passenger carriers.

FMCSA Response:

FMCSA completed additional analysis in the Crash Indicator BASIC Scenario Analysis on the impacts of removing or altering the weighting for fatal and injury crashes for all motor carriers. The result of this change would be an overall crash rate (6.13 crashes per 100 power units) for the group of carriers over the intervention threshold that is lower than the crash rate for the group of carriers over the intervention threshold in the current Crash Indicator BASIC (6.34 crashes per 100 power units), which suggests that it is not as effective at identifying high crash risk carriers.

Separate Safety Event Groups for Passenger and Property Carriers

The passenger carrier industry also suggested that FMCSA should establish separate safety event groups for passenger and property carriers. The ABA, NSTA, and FirstGroup America indicated that this change would result in a more balanced comparison of crashes.

FMCSA Response:

FMCSA previously considered this suggestion in the development of SMS and determined that it was not a viable option because the population of passenger carriers is too small and the range of company sizes, based on power units, is too great to establish reasonable safety event groups. Grouping this small population separately would result in artificially high percentiles for some carriers. However, as part of the correlation study required by Section 5221 of the FAST Act, this issue will be studied further by the National Academy of Sciences and any recommendations will be addressed upon completion of that study.

Normalize Based on Vehicle Miles Traveled (VMT)

ABA and NSTA recommended that FMCSA normalize the number of crashes using VMT to adjust the percentiles for the exposure of large carriers. It was presented that such a change would distinguish between carriers in high traffic areas and those that are not. These commenters believed that this change in the method of calculation would result in more accurate percentiles for large carriers.

FMCSA Response

FMCSA notes that VMT is already factored into the calculation of the Crash Indicator BASIC percentile. Currently, to normalize the Crash Indicator calculation, the Crash Indicator BASIC measure is calculated by dividing the sum of the time/severity weight for all applicable crashes by the Average Power Units (PU) multiplied by the Utilization Factor. The Utilization Factor is based on industry segment (combination or straight) and VMT, as noted in the following tables.

Table 1

Combination Segment VMT per Average PU	Utilization Factor
< 80,000	1
80,000 - 160,000	$1 + \frac{(VMT \text{ per } PU - 80,000)}{133,333}$
160,000 - 200,000	1.6
> 200,000	1
No Recent VMT Information	1

Table 2

Straight Segment VMT per Average PU	Utilization Factor
< 20,000	1
20,000 - 60,000	VMT per PU / 20,000
60,000 - 200,000	3
> 200,000	1
No Recent VMT Information	1

As a result, FMCSA is not considering any additional changes to how VMT is used with in the Crash Indicator. However, on June 29, 2015, the Agency published a Federal Register Notice titled, “Future Enhancements to the Safety Measurement System (SMS),” in which the Agency proposed increasing the maximum VMT used in the Utilization Factor to more accurately reflect the operations of high-utilization carriers. This proposed change would not impact the methodology described above. A preview of this proposed change, will be announced in a future Federal Register notice.

Additionally, FMCSA aligned its VMT data requirements with the Unified Registration System (URS). Previously, the SMS only used VMT data from a carrier’s registration form when the VMT-associated calendar year was within 24 months of the current year. This improvement enables the SMS to use a carrier’s VMT data regardless of VMT-associated calendar year.

C. Minimum Number of Crashes

While not submitted as a comment, the Agency also considered increasing the minimum number of crashes required in a 24 month period from two to three, or five, like the other SMS BASICS, before the crashes will be included in the SMS calculation.

As analyzed in the Crash Indicator BASIC Scenario Analysis, the overall crash rate for the group of carriers over the intervention threshold using a minimum of three

crashes is about the same as the crash rate for the group of carriers over the intervention threshold in the current Crash Indicator BASIC (6.33 vs. 6.34 crashes per 100 Power units). This suggests that using a minimum of three crashes would continue to identify a group of carriers with high crash rates. However, this change in data sufficiency provides the Agency with a high level of confidence. The number of crashes covered under this scenario is only slightly lower than the number of crashes for the current Crash Indicator BASIC (14,838 vs. 15,638 crashes).

However, when the minimum number of crashes is raised to five, the overall crash rate for the group of carriers over the intervention threshold is lower than the crash rate for the group of carriers over the intervention threshold in the current Crash Indicator BASIC (6.23 vs. 6.34 crashes per 100 PUs), which suggests that raising the minimum number of crashes to five would reduce the effectiveness of the Crash Indicator BASIC in identifying high crash risk carriers. The number of crashes covered under this scenario is lower than the number of crashes for the current Crash Indicator BASIC (13,337 vs. 15,638 crashes).

Based on this additional analysis, FMCSA is proposing to change the minimum number of crashes from two to three before a percentile is calculated in the Crash Indicator BASIC. This change is being added to the list of proposed enhancements announced in docket FMCSA-2015-0149, "Future Enhancements to the Safety Measurement System (SMS)" published in the Federal Register on June 29, 2015. The Agency will propose this change and announce a preview of this change in a future Federal Register notice.

D. Preventability Determination Process

The American Trucking Associations (ATA) provided a list of certain types of non-preventable crashes and suggested that FMCSA establish a process by which documents could be submitted on these crashes and they could be removed from the motor carriers' record. These crashes included when the CMV is struck by a motorist who:

- Was found responsible by law enforcement for the crash;
- Was the sole party cited;
- Was driving under the influence;
- Crossed the centerline or median;
- Was driving the wrong way;
- Struck the truck in the rear; or
- Struck the truck while legally stopped.

Additionally, ATA recommended that FMCSA consider a crash non-preventable when an individual commits suicide or vehicles are incapacitated by animals.

There were many comments that indicated that PARs, as currently completed and submitted to FMCSA, are not adequate for completing a preventability determination. KSS Trucking noted, "I must comment on the PAR accuracy in this situation. After reading the report and interviews I have noted some discrepancies. From something as simple as my license plate number...to something as extensive as my interview, there are differences in what was reported and what was recorded." Also, Advocates agreed with the Agency that "PARS cannot be relied on to reach dependable determinations as to crash causation." Several commenters, including the ATA, National Waste and Recycling

Association, and MTA, recommended that FMCSA require uniform PARs. The Oregon Department of Transportation recommended using PARs, Department of Motor Vehicle crash reports, and State motor carrier crash reports to determine preventability. Also, numerous commenters suggested using the Agency's existing Request for Data Review (RDR) process through the DataQs system for these requests.

NM Transfer Company, Inc. and Vigillo LLC recommended that FMCSA require States to make preventability determinations with the funding they are provided through the Motor Carrier Safety Assistance Program. The National Motor Freight Traffic Association, Inc. added that it is their opinion that police are taught to find fault. AMSA and ATA recommended that FMCSA tell the States not to upload the crash if the CMV or driver was not at fault. The Institute for Makers of Explosives suggested that all of the crashes be reviewed using the process currently in place for applicants for Hazardous Materials Safety Permits.

There were differing opinions on if and how the public could be involved in the preventability determination process. Advocates and the Owner-Operator Independent Driver Association (OOIDA) indicated that adjudications hearings are needed to protect the interests of all persons involved. Advocates also noted that the Agency did not propose any deterrents for filing fraudulently and excessively. OOIDA noted that, "When the government seeks to determine whether a[n] individual or company is at fault for causing bodily injuries or property damage, it must provide the accused a right to a hearing before a neutral fact-finder; the ability to offer evidence and witnesses; and the opportunity to challenge evidence and witnesses against them. Under our country's systems of legal fairness and due process, FMCSA may not unilaterally determine fault,

notify the public of that determination, and punish the motor carrier by damaging its reputation. This is a problem with both FMCSA's current and proposed system of dealing with crashes. If there was a legal proceeding related to an accident where there was a finding of fault or admission, FMCSA may rely upon the determination of fault in that proceeding. That would be the only reliable source of information about crash fault to FMCSA."

Regarding the estimated costs for a preventability determination process, the National Tank Truck Carriers indicated "this would be money well spent if it served the over-riding purpose of identifying unsafe driving behavior." However, several commenters, including Advocates, indicated that this would be millions of dollars "that would not lead to any improvement in data quality."

FMCSA Response

The Agency considered the list of crash scenarios recommended by ATA and agrees to consider whether certain of these scenarios are most often non-preventable. As a result, the Agency is developing a demonstration program and a process for submitting documentation about these crashes through the DataQs program, similar to the process by which individuals may submit documentation of adjudicated citations. It will then evaluate the data to determine if the hypothesis offered by ATA - that certain types of

crashes are non-preventable - is proven correct, and, if so, whether changes should be made to the Agency's programs. A separate Federal Register notice seeking comments and input on a process to make preventability determinations on some specific types of crashes is available elsewhere in today's **Federal Register** and is also in docket FMCSA-2014-0177.

Issued under the authority delegated in 49 CFR 1.87 on: July 5, 2016

T. F. Scott Darling, III
Acting Administrator.

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