

**FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION
U.S. DEPARTMENT OF TRANSPORTATION
COMPREHENSIVE SAFETY ANALYSIS 2010 (CSA 2010)
(DOCKET #FMCSA-2004-18898)**

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The American Trucking Associations, Inc. (ATA)¹ is pleased to submit the following comments to the Federal Motor Carrier Safety Administration (FMCSA) on its Comprehensive Safety Analysis (CSA 2010) initiative and model (hereafter also known as the Model). ATA is vitally interested in the design and implementation of new programs that will affect the safety fitness determination of motor carriers and drivers.

Overall, ATA supports the CSA 2010 concept, and FMCSA's desire to fundamentally change its programmatic approach to compliance oversight. CSA 2010 provides FMCSA the opportunity to overcome some of the shortcomings of the current rating system. ATA members have long stated such concerns as assuring data quality, having access to rating databases, using vehicle miles traveled in lieu of power units as a normalizing factor, and establishing an equitable system in determining accountability for crashes. To this end ATA has several recommendations to help make the CSA 2010 Model more reliable and effective in approach and delivery.

I. General Recommendations

The Agency needs to modify certain aspects of CSA 2010 if the ultimate goal is to improve safety performance of motor carriers and drivers that will result in safer highway operations. This includes providing positive factors to promote motor carrier and driver improvements; recognizing that regulatory non-compliance does not necessarily predict future crash occurrence; and assuring motor carrier access to databases for purposes of driver monitoring.

Evaluation elements should incorporate positive factors to encourage drivers and motor carriers to make progressive advances in safety performance as well as negative indicators to pinpoint deficient practices. Three factors that can be used are:

¹ ATA is a united federation of motor carriers, state trucking associations, and national trucking conferences created to promote and protect the interests of the trucking industry. Its membership includes more than 2,000 trucking companies and industry suppliers of equipment and services. Directly and indirectly through its affiliated organizations, ATA encompasses over 34,000 companies and every type and class of motor carrier operation.

1. *Include positive data from roadside inspections when no violations are found.* If zero violations were found in an inspection then “0” should be entered into the calculation formula. All inspections should be counted whether or not a violation was found. This would more appropriately determine the degree and frequency of problems for a particular motor carrier or driver and thus be the better indicator of risk. More violations alone do not necessary mean more risk. Size of a motor carrier’s operations and potential for inspection also are major statistical considerations.
2. *Build positive credits into the system for motor carriers making investments in progressive safety management and compliance practices.* Credits could initially include involvement in an employer notification system for motor vehicle record (MVR) checks (Driver Fitness BASIC²); voluntary deployment of safety technologies, such as electronic on-board recorders for hour-of-service compliance (“Fatigued Driving” BASIC) and collision mitigation systems (Unsafe Driving BASIC); participation in voluntary drug and alcohol test results clearinghouse(s) (Controlled Substances & Alcohol BASIC); and conduct of comprehensive and specialized training programs (Driver Fitness and Unsafe Driving BASICS).
3. *Add driver incentives to the process,* such as, recognition for clear MVRs; no out-of-service violations within at least X number of inspections, and completion of recognized driver training programs.

Additionally, FMCSA should place less reliance on regulatory violations in its assessments and more on past crash occurrence and other meaningful predictors. An improved methodology focusing on certain moving violations, particular regulatory violations and past crash history could prove more beneficial in identifying high risk motor carriers and drivers than the current CSA 2010 approach. This proposal is based on research conducted by the American Transportation Research Institute (ATRI).

In October 2005, ATRI with its research partners the North Dakota State University Upper Great Plains Transportation Institute (UGPTI) and the Commercial Vehicle Safety Alliance (CVSA), published a study “Predicting Truck Crash Involvement: Developing a Commercial Driver Behavior-Based Model and Recommended Countermeasures.” Individual behaviors and events were statistically and independently analyzed to allow for improved targeting by behavior. The study’s analysis determined a range of statistically significant driving behaviors and events – including violations, convictions, and past crashes. The findings showed increases in specific risks ranging from 18 to 325 percent, and revealed that drivers who had a previous crash were 87 percent more likely to have a future crash.³

Also, any comprehensive driver database established under CSA 2010 needs to be accessible by motor carriers so that they can be proactive in resolving driver deficiencies. Access would prove useful in better identifying high risk drivers during pre-employment screening and allow for preemptive intervention practices by management. Providing for motor carrier use of the database would timely solve problems as these are revealed, and thus allow FMCSA to better direct its limited resources toward at-risk and non-compliant motor carriers and drivers.

² BASIC = Behavioral Analysis Safety Improvement Category. The seven BASICS are: (1) Unsafe Driving, (2) Fatigued Driving, (3) Driver Fitness, (4) Controlled Substances/Alcohol, (5) Vehicle Maintenance, (6) Improper Loading/Cargo, and (7) Crash Indicator.

³ See ATRI website for report summary: <http://www.atri-online.org/research/results/One-Pager%20CMVE.pdf>.

II. Concurrent Implementation of the Motor Carrier Safety Measurement System and Driver Safety Measurement System

Given that crashes are caused by driver errors nearly 90% of the time, the Driver Safety Measurement System must be implemented at the same time as the Motor Carrier Safety Measurement System. It is critical to early program success for FMCSA to assure there is synchronized implementation of these two measurement systems.

The importance of modifying unsafe driver performance is inherently recognized by the agency in its decision to include driver performance information in the Motor Carrier Measurement System and, subsequently, using such data in determining carrier safety fitness. FMCSA understands that driver performance is integrally tied to the overall motor carrier safety performance. Simultaneous commencement of both systems, and providing for motor carrier and driver access to information affecting their rating, would likely result in spiked improvement in compliance and practice and, ultimately, in the objective of crash reduction. To utilize Model data in a fashion similar to that used in current measurement systems would likely lead only to marginal change.

The importance of capitalizing on driver performance information is emphasized in the previously mentioned ATRI study. Notably, FMCSA is also aware of this significance as made apparent in its Large Truck Crash Causation Study (LTCCS) report filed with Congress in March 2006.⁴ The conclusions section emphasized that:

“For all crashes in the study (single and multiple vehicle crashes), trucks were assigned the critical reason in 55 percent of the cases. Driver reasons accounted for 87 percent of the reasons, and most involved failure to correctly recognize the situation or poor driving decisions.”

“For two-vehicle crashes involving a truck and a passenger vehicle, trucks were assigned the critical reason in 44 percent of the crashes and passenger vehicle in 56 percent. Driver reasons accounted for the overwhelming majority of the critical reasons—88 percent for the trucks....”

Any issues that could delay concurrent implementation of Motor Carrier Safety Measurement System and Driver Safety Measurement System should first be addressed in the planned rulemaking regarding safety fitness determination, and not await passage of the next highway reauthorization bill.

III. Data Quality and Usage

In meeting the challenge of implementing CSA 2010, the agency must assure data quality and its utility. To this end, FMCSA must conform to the U.S. Department of Transportation’s (DOT) “Information Dissemination Quality Guidelines”.⁵ These guidelines apply to all its agencies and all media formats—printed, electronic, or otherwise—and obviously includes data and projections of the CSA 2010 Model. The guidelines advise FMCSA to “assess the usefulness of the information to be disseminated to the public” and “ensure information is accurate, clear, complete, and unbiased, both as to substance and presentation, and in proper context”.

⁴ See <http://www.fmcsa.dot.gov/facts-research/research-technology/report/lccs-2006.htm> for the FMCSA study.

⁵ See <http://dms.dot.gov/ombfinal092502.pdf> for the DOT Information Dissemination Quality Guidelines.

The DOT guidelines are built on those of the Office and Management and Budget (OMB). OMB defined for DOT what is “influential” as information that can be reasonably determined “will have or does have a clear and substantial impact on important public policies or important private sector decision”.

Clearly, FMCSA must assure that CSA 2010 has utility, and is accurate, complete and objective, especially, since it will have influential information, which can impact—motor carriers’ and drivers’ selection for compliance interventions; regulatory compliance costs; business opportunities in the shipping community; ratings by insurance carriers; and stock values for publicly-traded companies.

Success of the data quality aspects of the Model will rest on many factors. ATA offers the following suggestions:

- (1) There must be statistically accepted data quality standards built into the assessment methodology, and rooted into the Model prior to implementation.
- (2) Data utilized in evaluation elements must be accurate, timely and complete.
- (3) Adequate program measures are established to assure the actual quality of each State's data collection and reporting. Lack of the States' commitment to data quality would be a significant obstacle to the success of CSA 2010. States need to be held accountable for their performance in managing and communicating the data that supports the BASICS. If States are not held accountable, then the data needs to be managed at the Federal level. (Also, it should also be recognized that there are programmatic differences in how individual States carry out the Motor Carrier Safety Assistance Program, which introduce geographic biases into the Model.)
- (4) The matter and means of determining peer groups must be transparent and properly structured to measure similar motor carriers and drivers. Overall, elements of the Model should be fair and unbiased, and applicable to all trucking operations from one truck ownership to large scale fleets.
- (5) Data incorporated into the CSA 2010 must be posted in a confidential manner—yet, be obvious to drivers and motor carriers—so that they can access the specific information for safety intervention purposes, and to correct errors in data inputs. A method for drivers’ access to correct errors in data should be designed now, and not further delayed, and be similar in concept to the (motor carrier) DataQs system.
- (6) Issues associated with data sufficiency must also be addressed. Motor carriers may be able to demonstrate their commitment in the seven BASICS; however there may not be enough data to provide for a fair assessment. FMCSA must establish an algorithm to evaluate motor carriers with little or no data. Motor carriers should not be classified for or eliminated from intervention due to a lack of data.

Similarly, the means to rank drivers, or the relative scores assigned, must be based on the performance of all drivers. How much and what type of data will be required to establish a safety fitness rating for each driver will be a key decision. This could be problematic in that drivers with years of experience will likely have a lot of data, and drivers recently obtaining their commercial driver's license will have little or no data to generate an accurate safety fitness rating. If not properly approached a driver with little or no experience could have a better safety rating than a seasoned driver, just because they have not been through enough roadside inspections or have had inadequate exposure to law enforcement activities. Since inexperienced drivers tend to have more crash involvement than conscientious, experienced drivers, CSA 2010 should focus (weight data) more for those drivers that have newly obtained their commercial driver's license.

- (7) Current docketed issues with FMCSA data collection systems, particularly related to injury and property damage crashes, and “Crash/Incident Experience” methodology will require resolution if the CSA 2010 Model is to be effective. This includes resolving issues revealed by the Governmental Accountability Office and those noted by recognized research organizations such as the Oak Ridge National Laboratory.

We want to emphasize that the more data sources used in the CSA 2010 program, the larger the challenge for the agency to assure that the data is accurate, timely and complete, and, in application of this data, for assessment methodologies to meet data and statistical quality standards. Using meaningful predictors of safe performance rather than massing what data is available should be an underlying premise in Model development.

IV. CSA 2010 BASICS

ATA strongly encourages FMCSA to re-evaluate several aspects of the BASICS, (the significant evaluation categories of the CSA 2010 Model). The following are fundamental changes that need to be made:

General Concerns: The agency should reconsider its reliance on only a single deficiency in the unsafe driving or “fatigued driving” categories as sole determinant of an “unfit condition”. These are driver specific issues and not a realistic reflection of a motor carriers’ overall performance, and does not consider the size of a motor carrier’s driver workforce, i.e., 5 drivers, 100 drivers, 1000 drivers, etc. Single deficiencies in the unsafe driving and “fatigued driving” BASICS are more appropriately applied in the Driver Safety Measurement System. In regards to the Motor Carrier Safety Measurement System, assigned deficiencies for all BASICS should be scaled based on the number of drivers a motor carrier employs.

Also, more explanation and transparency is required on how the CVSA’s Level 1, 2, and as relative 3 and 5 inspections “and any other inspections resulting in related violations” can be used as normalizing factors for the “Fatigued Driving”, Vehicle Maintenance and Improper Loading/Cargo Securement BASICS. Equally important is how the data from these inspections will be weighted in regards to these BASICS.

Crash BASIC: *Vehicle miles traveled* (VMT) rather than power units must be included in the Crash BASIC as the exposure measure, since VMT is the industry-accepted factor to normalize data. VMT information is already made readily available to FMCSA in required data collected through biennial updates made by motor carriers on the MCS-150 (Motor Carrier Identification Report, OMB No. 2126-0013). Under item #21 of the MCS-150 motor carriers are required to “[e]nter the total mileage of all Commercial Motor Vehicles (CMV) in the company’s operation to the nearest 10,000 miles for the last calendar year”. Failure to provide reasonably accurate mileage information would be a manner of non-compliance (as it would additionally be for not entering the proper number of power units required on the MCS-150) rather than an issue of the agency not having access to such information.

FMCSA already recognizes the need to use VMT in making safety fitness determinations when on-site compliance audits are performed. If the agency is interested in assuring reliability of this information, then it could cross-reference MCS-150 mileage information against other records, such as State fuel tax miles records.

Moreover, using power units as a normalizing factor is inappropriate in that many trucks can be idle due to downturns in the economy, slowdown in individual motor carrier operations, the availability of drivers, or other reasons. Exposure on the nation’s highways is more accurately reflected by trucks being on the road, i.e., miles that are traveled by trucks that can result in crash potential. As mentioned at the October 2008 CSA 2010 listening session, the number of vehicles

is not a good surrogate in determination of exposure. This can be illustrated in another way. There are many motorcycles that are registered in North Dakota and parked throughout the winter months, compared to motorcycles registered in Arizona that can be operated all year long. To use motorcycle registrations as the normalizing factor for crash risks, when vehicles are idle, does not indicate exposure. Using miles traveled by motorcycles, while on the highway, is a predictor of exposure.

Also, *accident accountability* (chargeability) must be incorporated so that only crashes that can be attributed to truck drivers are included in the Crash BASIC. There is already significant research that truck drivers are not at-fault for many truck-involved accidents.

In a 1988 study by the Federal Highway Administration's Office of Motor Carriers (the predecessor organization to the FMCSA) Daniel Blower of the University of Michigan Transportation Institute examined 8,309 crashes in the Trucks Involved in Fatal Accidents (TIFA) database and found that passenger vehicles drivers made errors in 81% of the fatal crashes and truck drivers made 26%.⁶

In a 2002 study sponsored by the AAA Safety Foundation, Kostyniuk analyzed more than 10,000 fatal car-truck crashes in the Fatality Analysis Reporting System database for the years 1995-98 and found driver factors for 80% of the car drivers, while only 27% of the truck drivers.⁷

In FMCSA's Large Truck Crash Causation Study trucks were assigned the critical reason in only 44% and passenger vehicle in 56% of two-vehicle crashes.⁸

Clearly, motor carriers and their drivers should be assessed and held accountable under the Crash BASIC for crashes that they could have potentially avoided. To count all crashes, would skew crash data depending on the number of chance contacts with passenger vehicle drivers.

"Fatigue Driving" BASIC: The "Fatigue Driving" BASIC should be renamed Hours-of Service Compliance, since hour of service violations (the data that will be used in this BASIC) do not actually measure drivers' fatigue levels. Law enforcement officials issue violations based on regulated hours of service limits rather than determination of fatigue levels. There is no currently reliable, statistically valid and accepted method during roadside inspections to measure fatigue. Since hours of service violations are what is to be measured under this BASIC, it needs to be properly entitled Hours of Service Compliance.

Create HazMat Specific BASIC: There should be a separate HazMat BASIC rather than including HazMat violations in the Loading/Cargo Securement BASIC—in that this "high risk" class has additional regulatory requirements and motor carriers transporting these materials are subjected to increased oversight. FMCSA has indicated that each BASIC is intended to represent a regulatory compliance factor that could increase the potential of an accident or incident. Hazardous materials shipments that are not compliant with the hazardous materials regulations could cause an accident or exacerbate the consequences of an accident. For the reason, hazardous materials should be categorized as a distinct BASIC. Moreover, the HazMat out-of-service rate is a separate metric that is used by FMCSA to determine eligibility for the Part 385 hazardous materials safety permit. These special risks and regulatory assessments necessitate a specific BASIC for HazMat.

⁶ D.F. Blower, "The Relative Contribution on Truck Drivers and Passenger Car Drivers to Two-Vehicle, Truck-Car Traffic Crashes", Publication No. UMTRI-98-25, University of Michigan Transportation Research Institute, Ann Arbor, MI, 1988.

⁷ Kostyniuk LP, Streff FM, Zakrajasek J., "Identifying Unsafe Driver Actions that Lead to Fatal Car-Truck Crashes", Washington, DC, AAA Foundation for Traffic Safety, April 2002.

⁸ See footnote #4.

The agency's explanation at the October 2008 CSA 2010 listening session for why there is not currently a HazMat BASIC is not convincing. The explanation given for not having a HazMat BASIC was because it was not behaviorally based. If this reasoning is followed then among the seven BASICS, three would be eliminated. The three would include Vehicle Maintenance, Crash Indicator, and Improper Loading/Cargo Securement.

Improper Loading/Cargo Securement BASIC: The agency should also be aware that gathering significant data on "Improper Loading/Cargo Securement" would require many extensive inspections of a large number of trucks to determine if a company actually has a safety problem. At-fault determinations will also be difficult in that many trailers are loaded and sealed by shippers without opportunity for examination by the driver or company.

Unsafe Driving BASIC: There are data quality issues unique to this BASIC that are rooted in lack of State uniformity. This is caused by some States focusing much more on traffic enforcement versus truck inspections and, as a result, issuing more moving violations than other States. Furthermore, the processes of challenging charges in States are different and some States give greater weight to certain offenses than other States.

If moving violations data from roadside inspection reports are used, there needs to be standard violation codes, which are both accepted and implemented by all States. In addition to the standardized violation codes there will be a need to assure that adequate training is provided to local and State officials and law enforcement on definitions, data elements, and reporting practices. Otherwise, FMCSA will need to "modify" the data from the various States to assure that the same weight is applied to violations based on recognized quality standards.

V. Interventions

ATA recommends adding third-party consultations as an intervention strategy to the CSA 2010 Model. FMCSA has recognized that they have limited resources and currently only "touch" two percent of motor carriers annually. Industry experts can serve to supplement Federal and State compliance staff. The concept is not novel. FMCSA currently contracts with third-parties to conduct new entrant (motor carrier) safety audits. The Occupational Safety and Health Administration (OSHA) has had for a long time a structure to provide third-party consultations.⁹ Industry experts and organizations that meet requirements through prescribed credentials and/or have undergone specialized training, possibly offered by the DOT's Transportation Safety Institute (TSI), could aid motor carriers and drivers by performing mock audits and assist in other safety and compliance improvements. In the future FMCSA could recognize and control the quality of third-party consultations, through its planned rulemaking on Certification of Safety Auditors, Safety Investigators, and Safety Inspectors.¹⁰

Overall, it remains unclear when and how the various CSA 2010 interventions will be applied to gain corrections following identification of deficiencies. FMCSA should involve the industry in what weight individual interventions should receive. There also needs to be transparency and educational steps taken in the very near future to assure motor carriers and drivers understand the manner each intervention will be used, and what level of remedial action will be required. Prior to implementation of CSA 2010, the agency should provide public access to compliance staff directives that advise how interventions will be applied. Not doing so, could lead to undesired reactions to the CSA 2010 efforts and inconsistency in correction.

⁹ See OSHA consultation website at <http://www.osha.gov/dcsp/smallbusiness/consult.html>.

¹⁰ This rulemaking would require that any safety inspection, audit, or review be conducted by a certified inspector, auditor, or investigator. It is required by section 211 of the Motor Carrier Safety Improvement Act.

VI. Summary

ATA believes essential revisions to CSA 2010 are needed if it is to be viable, reliable, and instill confidence that high risk motor carriers and drivers are identified for interventions and grounds for safety ratings are justly determined. ATA recommends that:

- Positive credits for safe performance be built into the Model.
- Less reliance be placed on regulatory violations in assessments and more emphasis be focused on past crash occurrence and other meaningful predictors.
- Any comprehensive driver database be accessible by motor carriers so that they can be proactive in resolving driver deficiencies.
- There be concurrent implementation of the Motor Carrier Safety Measurement System and Driver Safety Measurement System.
- Data quality issues receive priority attention to ensure the underlining effectiveness of the Model.
- The BASICS be properly defined and delineated, which includes a HazMat BASIC and that assures data actually reflects proper assessment of each BASIC.
- Intervention strategies include third-party consultations to provide for effective use of available resources.

To assure improvements, CSA 2010 needs to be transparent and active feedback from the industry must be continuously solicited. To increase public input and understanding:

- Listening sessions should continue and participants provided an opportunity to comment on all aspects of the Model, including pilot program evaluation reports.
- At least one year prior to deployment, the final Model and its elements should be generally publicized through media releases and educational efforts.
- Future CSA 2010 program directives to field compliance personnel regarding implementation practices and procedures should be made publicly available to encourage conformance with intervention strategies and promote regulatory compliance.

ATA thanks the agency for the opportunity to comment on how motor carriers' and drivers' safety fitness will be determined in the future. We offer our services to make this a successful endeavor.