

Written Statement of
American Trucking Associations, Inc.

Before the

COMMITTEE ON TRANSPORTATION AND
INFRASTRUCTURE
SUBCOMMITTEE ON HIGHWAYS AND TRANSIT
U.S. HOUSE OF REPRESENTATIVES

HEARING

Evaluating the Effectiveness of DOT's Truck and Bus Safety Program

September 13, 2012



Driving Trucking's Success

American Trucking Associations
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Introduction

Chairman Duncan, Ranking Member DeFazio, and members of the Subcommittee, my name is Scott Mugno and I am the Vice President of Safety for FedEx Ground Package System, Inc. (FedEx Ground), a nationwide provider of small-package delivery services, headquartered in Pittsburgh, PA. I am testifying today on behalf of the American Trucking Associations (ATA). ATA is the national trade association for the trucking industry and is a federation of affiliated State trucking associations, conferences, and organizations that together are comprised of more than 37,000 motor carrier members representing every type and class of motor carrier in the country.

ATA is a strong advocate for highway safety and has a long history of supporting safety initiatives. While I am testifying on behalf of the ATA, I note that FedEx Ground currently holds the highest DOT safety rating a company can achieve and maintains an exceptionally favorable crash history. However, despite FedEx Ground's high safety rating, favorable crash history, and longstanding commitment to safety, our Compliance, Safety, Accountability (CSA) score in the *Driver Fitness* measurement category is above the FMCSA's set threshold. Many ATA member carriers with exemplary safety records and low crash rates, like FedEx Ground, find themselves singled out by the agency due to high CSA measurement category scores. Yet, these scores erroneously reflect unsafe performance since the data and methodology supporting some of the CSA measurement categories are flawed.

CSA, as currently structured, often focuses FMCSA enforcement resources on the wrong carriers. As discussed below, FMCSA's own analysis confirms that scores in certain measurement categories of CSA, including the *Driver Fitness* category, do not reliably identify those carriers that are more likely to have future crashes. In fact, in the *Driver Fitness* category, the analysis concluded that there appeared to be no difference in crash rates for carriers with scores exceeding the FMCSA intervention threshold to carriers whose scores did.¹ FMCSA should be focusing on companies that present a crash risk, rather than on those carriers, like many ATA members, that have a record of safe operations yet a high score in a CSA category that does not reliably reflect crash risk. This would be a more appropriate use of Federal resources in contrast to FMCSA's current approach.

Before discussing the CSA program in more detail, I want to reiterate that ATA supports efforts to improve motor carrier safety and has been supportive of the objective of CSA, to reduce commercial motor vehicle crashes, injuries and fatalities,² since the program's inception. By design, CSA leverages performance-based data to provide real-time measures of safety performance. In doing so, CSA is intended to focus FMCSA's limited enforcement resources on the least safe carriers. Through its streamlined intervention process, CSA helps FMCSA "touch"

¹ Federal Motor Carrier Safety Administration, *Evaluation of the Comprehensive Safety Analysis 2010 Operational Model Test*, Federal Motor Carrier Safety Administration, August 2011, available at <http://csa.fmcsa.dot.gov/Documents/Evaluation-of-the-CSA-Op-Model-Test.pdf>, at 33, 42.

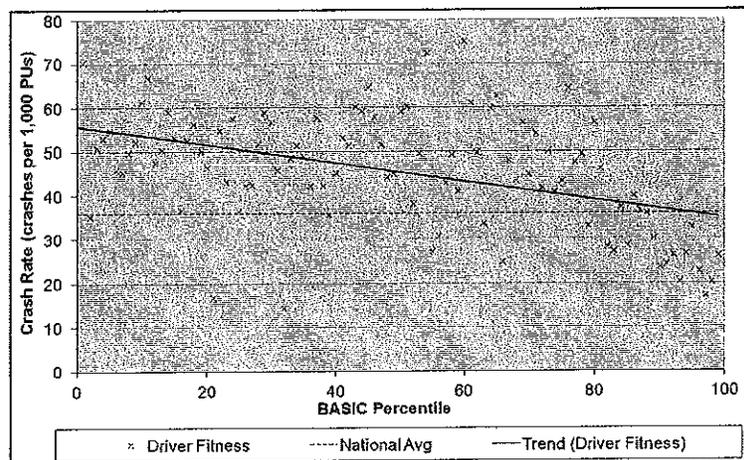
² CSA is an FMCSA "initiative to improve large truck and bus safety and ultimately to reduce crashes, injuries, and fatalities that are related to commercial motor vehicles." See <http://csa.fmcsa.gov/about>.

more carriers annually. Finally, CSA has the potential to provide meaningful information to third parties (e.g., shippers, insurers) in their efforts to make safety-based business decisions.

CSA Concerns

Though supportive of the objective of CSA, ATA has significant concerns with the program in its current form. Specifically, ATA is troubled by the low reliability, accuracy and significance of CSA scores, especially the lack of a relationship between carriers' scores and their future crash risk. Moreover, ATA is frustrated by FMCSA's unwillingness to acknowledge these weaknesses and correct them before making carriers' scores public and implying that they are measures of safety performance.

Prior to implementing CSA nationwide, FMCSA conducted a test of the system in nine states, called the *Comprehensive Safety Analysis 2010 Operational Model Test*, and gathered data on the program's effectiveness. A subsequent evaluation of this test, sponsored by FMCSA and conducted by the University of Michigan Transportation Research Institute (UMTRI), found that scores in some measurement categories did not have a strong relationship to future crash risk, if any. In fact, the FMCSA/UMTRI analysis concluded that scores in the *Driver Fitness* category have an inverse relationship to crash risk. That is, as carriers' *Driver Fitness* scores get higher, their crash risk actually drops.³ Yet, even after this report was published, FMCSA issued written guidance to shippers and others saying that all BASICs "are important to safety performance."⁴ A chart depicting the relationship between crash rates and *Driver Fitness* scores is below.



³ Federal Motor Carrier Safety Administration, *Evaluation of the Comprehensive Safety Analysis 2010 Operational Model Test*, Federal Motor Carrier Safety Administration, August 2011, available at <http://csa.fmcsa.dot.gov/Documents/Evaluation-of-the-CSA-Op-Model-Test.pdf>, at 42.

⁴ Federal Motor Carrier Safety Administration, *Just the Facts About SMS*, May 2012, available at http://csa.fmcsa.dot.gov/Documents/FMC-CSA-12-013_SMS_Just_Fact-508.pdf.

Since the release of the FMCSA/UMTRI evaluation, a growing number of researchers and credible organizations have conducted analyses casting further doubt on the relationship between carriers' scores and crash risk. For example, in November 2011 Wells Fargo Securities conducted an analysis of the scores belonging to the 200 largest carriers in the North America.⁵ In doing so, they were unable to find any "*meaningful statistical relationship between poor BASIC scores and accident incidence.*"⁶ In order to validate their findings, Wells Fargo conducted an additional study in July 2012 using a broader data set – 4,600 motor carriers. This more recent study also failed to find a meaningful statistical relationship between most CSA BASIC scores and actual crash rates.⁷

More recently, Dr. James Gimpel, a statistician and professor in the Department of Government and Politics at the University of Maryland, published his analysis of the statistical validity of the CSA scoring methodology. In particular, he focused on the system's efficacy in identifying and prioritizing the least safe carriers and the relationship between carrier's scores and crash risk. In short, he also found that the statistical association between crash risk and BASIC scores was "*so low as to be irrelevant.*"⁸ In one measurement category, he found the use of CSA scores as a predictor of crash risk as "*little better than guessing.*"⁹ In another, he found the relationship between CSA scores and crash risk to be negative.¹⁰ In other words, as carriers' scores got worse, their crash risk improved. He went on to say that "*There are serious problems with the design of these instruments themselves that render them unreliable.*"¹¹

These findings lead ATA to draw two important conclusions. First, the system creates flawed measurements of carriers' relative safety performance. These measurements undermine the efficient use of Federal resources to identify and impact unsafe carriers, as well as drive third parties relying on CSA data to make improper safety-related business decisions. Second, this lack of a statistical relationship between compliance measures and safety performance confirms that motor carriers bear an unnecessary regulatory burden. In short, CSA measures regulatory compliance but also shows that non-compliance with certain regulations does not correspond to crash risk.

The limitations that impact CSA fall into two distinct categories:

- 1) Problems with the underlying data that feed the system; and
- 2) Problems with the methodology used to assign motor carrier's safety performance scores.

A discussion of these problems follows.

⁵ Anthony P. Gallo & Michael Bushce, Wells Fargo Securities, *CSA: Good Intentions, Unclear Outcomes*, November 4, 2011.

⁶ Anthony P. Gallo & Michael Bushce, Wells Fargo Securities, *CSA: Another Look with Similar Conclusions*, June 2, 2012, at 1.

⁷ *Id.*

⁸ James Gimpel, University of Maryland, *Statistical Issues in the Safety Measurement and Inspection of Motor Carriers*, at 9-10.

⁹ *Id.* at 5.

¹⁰ *Id.* at 6.

¹¹ *Id.* at 8-9.

Data Problems

The effectiveness of CSA is plagued by a variety of data problems. The principal data weakness is the fundamental lack of information upon which to measure carrier safety performance. FMCSA acknowledges that it only has adequate data to score 40% of active motor carriers in at least *one* of the measurement categories, but does not report how few carriers are scored in *all* or even most categories.¹² In short, critical safety data for the vast majority of motor carriers is not generated or, when it is generated, not reported to FMCSA. Because the foundation of CSA is measurement of carrier performance relative to others, this lack of data represents a substantial weakness, and impacts the accuracy and relevance of CSA scores. Carriers with "poor" scores are measured relative to only those carriers for whom the FMCSA has adequate data from which to draw a comparison, not against the entire industry.

The shortage of data has a particularly profound effect on small trucking companies. Due to a lack of exposure (e.g., few roadside inspections), many small companies do not generate adequate data to produce CSA scores. Those carriers that do generate scores are then perceived to be less safe, simply because they have scores, when compared against other carriers that are not scored. Also, given the small amount of data on which small carrier performance is often measured, just a few events (e.g., violations/crashes) can cause a small carrier's scores to change dramatically. As the aforementioned Gimpel study pointed out "*smaller trucking firms are subject to few inspections, meaning that whatever BASIC scores they generate, high or low, are not reliable indicators of these firms' propensity to operate safely and in compliance with regulatory standards.*"¹³

Other data problems hamper CSA as well. For instance, some states engage in vastly disproportionate enforcement of certain regulations.¹⁴ As a result, carriers in these states are far more likely to be cited for these infractions. These fleets appear to be less safe when compared to carriers operating in other states - not because they are less safe, but because they travel in states with more robust enforcement programs. This problem more profoundly impacts small carriers operating in these states.¹⁵

Also, a number of states fail to report many of the commercial motor vehicle crashes occurring on their roadways to FMCSA's database. In fact, according to UMTRI¹⁶ and FMCSA¹⁷ analyses,

¹² FMCSA has adequate data to score roughly 200,000 of the estimated 500,000 estimated active carriers in at least one measurement category. See *CSA: Proposed Changes to Improve on a Solid Foundation*, June 2012, slide 5, available at <http://csa.fmcsa.dot.gov/resources.aspx>

¹³ Gimpel, University of Maryland, *Statistical Issues in the Safety Measurement and Inspection of Motor Carriers*, at 12.

¹⁴ *Id.* at 2, 12.

¹⁵ The impact to large carriers is mitigated because data from a single state only represents a small portion of their total data (since they often operate in many states). Conversely, a small carrier may operate in only a few states.

¹⁶ Daniel Blower & Anne Matteson, *Evaluation of 2008 Mississippi Crash Data Reported to the MCMIS Crash File*, January 2010, available at http://www.umtri.umich.edu/content/Mississippi2008_final.pdf, at 8.

15 states report less than 75% of their crashes to the database. Interestingly, FMCSA attempts to minimize its lack of CSA violation data by pointing out that it has adequate information to score the carriers involved in 92% of crashes reported to the agency.¹⁷ Yet, this argument is circular since many crashes do not get reported to FMCSA.

Methodology Problems

The accuracy and significance of CSA scores are also impacted by a number of methodology problems. One of the most significant of these problems is the assignment of "points" or severity weights to various violations in the system. By design, each violation is supposed to be assigned a weight on a scale of 1- 10 based on its relative severity (relationship to crash risk). However, many of the weights are illogical or, as UMTRI called them in its evaluation of the program, "arbitrary." Other methodology issues impact scores as well. For instance, warnings issued for moving violations bear the same weight as citations and, in many cases, citations dismissed in court bear the same weight as convictions.

Perhaps the single biggest problem with the CSA methodology is that it measures motor carriers on all crashes they are involved in, regardless of fault. Intuitively, at-fault crashes are the best measures of safety performance. However, FMCSA measures carriers based on these crashes and those they did not cause nor could have prevented. In other words, a carrier that is rear-ended while stopped at a red light is perceived as being just as safe/unsafe as one that rear ends another motorist or crosses a median and strikes another vehicle head-on.

For more than three years, ATA has been calling on FMCSA to establish a process to evaluate crash accountability and modify the CSA methodology accordingly. In mid-2010, the agency conducted a study of the reliability of police accident reports (PARs) in making crash accountability determinations. Researchers found that those tasked with reviewing the reports were able to make consistent crash accountability determinations in 93% of the instances tested. Subsequently, FMCSA developed a process to make crash accountability determinations and was prepared to implement it, but in March 2012 reversed course saying the issue needed further study.

Just over a month ago, FMCSA announced that it would be spending another year studying the issue before developing a corresponding solution and that solution may not be implemented until months afterwards, if at all. While ATA appreciates FMCSA responding to calls for a timeline of next steps, our members are frustrated by the delays in resolving this fundamental flaw in the system. It now appears that FMCSA may not be poised to even propose a solution, let alone implement one, until three years after the agency first began studying the issue.

¹⁷ As reported by the FMCSA, Nevada, New Mexico, Mississippi and Florida have a crash reporting rating of "poor." A rating of "poor" means that less than 50% of non-fatal crashes were reported to the FMCSA. See <http://ai.fmcsa.dot.gov/DataQuality/improve/nfcc.aspx?i=6&ns=N>.

¹⁸ FMCSA's Response to Public Comments of Safety Measurement System Changes, 77 Fed. Reg. 52110 at 52111 (Aug. 28, 2012).

Naturally, ATA recognizes that it will be difficult to make accountability determinations with respect to some crashes. However, there are others, such as when a motor carrier is rear-ended while stopped at a red light, that are very straightforward. In ATA's view, it is unnecessary to complete 12 months of research to conclude that a carrier involved in such a crash should not be labeled as unsafe and subsequently prioritized for enforcement. Accordingly, FMCSA should establish a near-term process to address these crashes where accountability is so plainly evident.

FMCSA contends that it is appropriate to score carriers based on all crashes, not just preventable ones, because its analysis reflects that past crash involvement, regardless of fault, is a strong predictor of future crash involvement. This conclusion may be true, however crash involvement is not an indicator of a fleet's likeliness to *cause* crashes but rather a consequence of the environment in which it operates. Fleets operating in urban and congested areas have more crashes than fleets operating in rural areas, but that does not mean they are any more prone to *causing* them.

In fact, FMCSA's current safety rating methodology acknowledges the role exposure plays in crash risk. Specifically, FMCSA sets a higher threshold for acceptable crash rates for those carriers operating exclusively in urban environments. The language in the safety rating methodology reads as follows:

Experience has shown that urban carriers, those motor carriers operating primarily within a radius of less than 100 air miles (normally in urban areas), have a higher exposure to accident situations because of their environment and normally have higher accident rates.¹⁹

For most carriers, FMCSA has established a threshold of 1.5 crashes per million miles as acceptable performance. Carriers with crash rates above that threshold are assigned a rating of "Unsatisfactory" in the *accident factor* of the safety rating methodology and, as a result, are unable to obtain an overall safety rating better than "Conditional." However, for urban carriers the acceptable threshold for measuring safe performance is 1.7 crashes per million miles.

Rather than devoting attention to carriers that endure greater exposure due to their operating environment, FMCSA should direct its limited resources where they would be most effective in preventing future crashes – by focusing on unsafe carriers that are *causing* them. After all, doing so would help better meet the objective of CSA, which is to reduce crashes injuries and fatalities.²⁰

¹⁹ See 49 C.F.R Part 385 Appendix B- Explanation of Safety Rating Process, B. Accident Factor.

²⁰ See note 1.

Acknowledgement of the Program's Limitations

Though an early advocate of the CSA program, ATA has become increasingly concerned with CSA's serious flaws. Moreover, ATA is troubled by FMCSA's unwillingness to acknowledge CSA's limitations and fix them.

A good example of this approach is FMCSA's continued use of the *Driver Fitness* measurement category. As discussed above, the UMTRI evaluation found that there appeared to be no difference in crash rates between carriers with *Driver Fitness* scores exceeding the FMCSA intervention threshold and carriers whose scores do not exceed the threshold.²¹ In other words, the *Driver Fitness* category measures a fleet's compliance with regulations, but not its propensity to actually be involved in a crash. For example, a common *Driver Fitness* violation occurs when a driver fails to keep a medical certificate in his/her possession while operating a commercial motor vehicle. While the driver's failure to carry a medical certificate on his or her person is a violation of the Federal Motor Carrier Safety Regulations, the failure to carry this type of paperwork does not make the driver any more likely to be involved in a crash.²² Rather than acknowledging this problem and working to correct it, the agency points to the importance of highlighting compliance with regulations, even those that do not have a statistical relationship to safety.

There is no doubt that FMCSA's intent in designing the CSA system was to identify carriers that are less safe - in other words, those more likely to have crashes. For instance, the CSA methodology says the goal of CSA is *to reduce commercial motor vehicle (CMV) crashes, fatalities, and injuries*. Consistent with this goal, FMCSA's intent (according to its document outlining the process for assigning violation severity) was to assign weights to violations based on their statistical correlation to crash incidence and crash severity.²³ FMCSA has repeatedly acknowledged that the objective of the program is to yield 'the greatest *safety* benefits' (emphasis added).

FMCSA is now perpetuating this flaw by making modifications to the program. In a few months the agency will implement a new measurement category to rank carriers that haul hazardous materials. FMCSA candidly acknowledges that the goal of this category "...is *not to predict future crash risk*."²⁴ Instead, FMCSA says the category better identifies carriers that are more likely to commit future hazardous materials violations. The agency points to the importance of identifying such carriers since hazardous materials can increase the consequences of a crash, but presents no data to show that HM carriers have crashes with worse outcomes as a result of hazardous materials violations.

²¹ University of Michigan Transportation Research Institute, *Evaluation of the Comprehensive Safety Analysis 2010 Operational Model Test*, at 42.

²² Notably, drivers still receive this violation even though they are properly qualified to drive by a medical examiner.

²³ *Carrier Safety Measurement System (CSMS) Violation Severity Weights*, Federal Motor Carrier Safety Administration, November 2009.

²⁴ *Safety Measurement System Changes*, Federal Motor Carrier Safety Administration, June 2012, at 7.

While compliance with regulations is important, ATA questions the merits of assigning a higher priority to these carriers than those that are actually less safe. If, as FMCSA contends, the intent of the system is to *prioritize* carriers, then less safe carriers should be assigned higher scores than safe carriers that have patterns of violations that are not safety-related. Intuitively, this is the most efficient and effective use of Federal resources.

The inability of the system to identify the least safe carriers impacts more than FMCSA's enforcement prioritization program. CSA scores are used by third parties to make business decisions as well. The following paragraph from FMCSA's CSA methodology explains that:

In addition to supporting the CSA Operational Model, the Safety Measurement System (SMS) results can provide other stakeholders, such as insurers and shippers, with valuable safety information. The SMS results will be easily accessible via the Internet to encourage improvements in motor carrier safety. Findings from the SMS will allow the evaluated carriers an assessment of their weaknesses in various safety areas. In turn, the SMS will empower motor carriers and other stakeholders involved with the motor carrier industry to make safety-based business decisions.²⁵

The implication, of course, is that the CSA scores are a measure of safety – not compliance. Of course, as mentioned above, the system sometimes measures compliance with regulations which, according to the FMCSA/UMTRI, Wells Fargo and Gimpel analyses, do not have a statistical correlation to crash risk. CSA scores, therefore, can lead stakeholders such as shippers and insurers to believe that safe carriers are unsafe. This is simply poor public policy.

As an example, the chart below reflects CSA scores from several large, national motor carriers as of May 2012. The data indicate that these carriers' high scores in the *Hazardous Materials* category are inconsistent with their performance in all other categories. Most importantly, their *Crash Indicator* scores are all in the top 30th percentile, meaning that they perform better in this category than 70% of like carriers.

	Unsafe Driving	Fatigued Driving*	Driver Fitness	Controlled Substances/ Alcohol	Vehicle Maintenance	Hazardous Materials**	Crash Indicator
Carrier A	6.9	39.5	24.7	N/A	58.4	78.2	25.6
Carrier B	33.1	39.2	41.5	0.4	51.7	91	21.9
Carrier C	21.5	12.1	40.4	2	62.8	91.7	29.8
Carrier D	3.4	22.8	26.5	0.1	24.1	86.9	29.3

²⁵ *Safety Measurement System (SMS) Methodology*, Version 2.2, Federal Motor Carrier Safety Administration, January 2012, available at <http://csa2010.fmcsa.dot.gov/documents/smsmethodology.pdf>, at 1-2.

* FMCSA has indicated in that the *Fatigued Driving* BASIC will be renamed the *Hours of Service Compliance* BASIC in December 2012.

** FMCSA has indicated that this category will be named the *Hazardous Materials Compliance* BASIC in December 2012.

Conclusion

ATA supports the laudable objective of CSA, to reduce commercial motor vehicle crashes, injuries, and fatalities. CSA is a potentially powerful tool to achieve this objective. However, data and methodology problems undermine the effectiveness of the system. Ultimately, these problems hamper the system's ability to accurately measure relative safety performance. As a result, FMCSA is less effective at targeting unsafe carriers for enforcement and third parties are encouraged to make business decisions based, in part, on erroneous safety measurements.

While ATA takes issue with certain specific elements of the CSA methodology, there is an overarching theme: CSA scores must reflect future crash risk. If they did, the system would provide a means for responsible fleets to distinguish themselves from those that do not share their commitment to safety, to properly leverage third parties to drive carriers to invest in safety, and to make better use of Federal enforcement resources. To achieve these benefits, FMCSA must take three very specific steps.

First, FMCSA must acknowledge that the system does not accurately and reliably identify unsafe carriers. In other words, CSA scores are not a reliable predictor of future crash risk. Second, the agency must confirm that, since the goal of the program is to reduce crashes, injuries and fatalities, CSA's highest priority should be to focus on the least safe carriers, not merely those carriers that have compliance problems. And finally, FMCSA must establish a specific plan to develop and implement the data and methodology changes necessary to ensure that the system functions as intended. Only then will CSA reach its fullest potential as a tool to improve highway safety.

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
Truth in Testimony Disclosure

Pursuant to clause 2(g)(5) of House Rule XI, in the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include: (1) a curriculum vitae; and (2) a disclosure of the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by an entity represented by the witness. Such statements, with appropriate redaction to protect the privacy of the witness, shall be made publicly available in electronic form not later than one day after the witness appears.

(1) Name: SCOTT A. MUGNO

(2) Other than yourself, name of entity you are representing:
AMERICAN TRUCKING ASSOCIATIONS (ATA)

(3) Are you testifying on behalf of an entity other than a Government (federal, state, local) entity?
 YES If yes, please provide the information requested below and attach your curriculum vitae.

NO

(4) Please list the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by you or by the entity you are representing:

FY12 (1/1-8/31)	USDOT-FHWA	\$5,000.00
FY11	USDOT-FHWA	\$23,000.00
FY10	USDOT-FHWA	\$12,500.00
<u>Total</u>		<u>\$41,000.00</u>

Scott A. Mugno
Signature

7 Sep 12
Date

Scott A. Mugno, J.D., is the Vice President, Safety and Vehicle Maintenance at FedEx Ground. Mr. Mugno and his department of 200 employees focus on creating a safe work environment for all employees, contractors and the public, minimizing and reducing accidents and injuries while maintaining regulatory compliance. They are also responsible for ensuring all equipment meets DOT requirements and is operational to service the transportation needs of the company. Additionally they manage fuel inventory reconciliation, retail pricing and administration of a fleet retail fuel card.

Mr. Mugno has been in the environmental, health, safety, or transportation arenas for over 24 years. He joined FedEx Express as a senior attorney in the Legal and Regulatory Affairs Department. He was promoted to the position of Managing Director, Safety, Health and Fire Prevention where he worked in Memphis before accepting his current position at FedEx Ground in Pittsburgh. Prior to FedEx, Mr. Mugno was division counsel at Westinghouse Electric Corporation's Waste Isolation Division and deputy staff judge advocate for the Eastern Region U.S. Army Military Traffic Management command. He has held other legal positions in the Army JAG Corps and in private-practice law firms. Mr. Mugno regularly represents FedEx at various trade and safety association and committee meetings and is a frequent speaker before those and other groups.