

**I. Jersey Barriers — by Doug Smith**  
**m. Side Underride Data and Analyses — by Eric Heim**

**D. Quon Kwan Notarized Statement**

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## Statement of Quon Kwan to the Advisory Committee on Underride Protection

My name is Quon Kwan. Prior to my retirement in May 2019, I worked as a general engineer at the U.S. Department of Transportation (U.S. DOT), where I rose to GS-14 in the Analysis, Research and Technology division of the Federal Motor Carrier Safety Administration (FMCSA).

In 2017, I proposed that my agency fund research to evaluate the synergistic effects of combining aerodynamic skirts with side guards on trucks, both single-unit trucks and tractor-trailers. The focus of the side guards was preventing fatalities of pedestrians and bicyclists, who as a group are called vulnerable road users. This is an important public safety concern because pedestrians and bicyclists have no protection whatsoever when they collide with or are struck by the sides of large commercial trucks. In a side collision with a moving truck, they get caught and are crushed to death beneath the rear axles. I wanted to know whether the protection offered to pedestrians and bicyclists could be combined with the fuel efficiency offered to a truck by aerodynamically designed side guards to achieve synergistic cost-effectiveness. My superiors reviewed and approved my research proposal, and it was funded with \$200,000. I selected the Volpe National Transportation Systems Center (VNTSC or Volpe) in Cambridge, MA to perform the research because they had done previous research on standards for side guards on trucks. I composed an official Statement of Work for contract SA9PAI, which was agreed to by the Volpe Center, and I managed this project for FMCSA among several other heavy-duty truck safety research projects until my retirement.

The Statement of Work for this project specified key tasks including a (i) project plan; (ii) literature review of side guards domestically and internationally; (iii) a detailed examination of technical concerns such as how external parts of the truck, such as fuel tanks and fire extinguishers, would interact with a side guard, (iv) cost benefit analysis, (v) final report; and (vi) technology demonstration. While all of these were important, I regarded the cost benefit analysis to be the most critical task of this research project. This was critical because if side guards would both protect the safety of vulnerable road users while at the same time offer improved fuel efficiency and reduce fuel costs, the industry might adopt such side guards voluntarily. Voluntary adoption of standards is preferred to imposed government regulation under the National Technology Transfer and Advancement Act of 1996. Notwithstanding, cost benefit analysis is required for any government regulation by Executive Order (E.O.) 12866, which was issued in 1993 and remains in effect.

Over the period of performance by the Volpe Center, I regularly reviewed and provided comments on the Volpe research team's work. As the customer, my input on and interpretation of the task requirements were taken very seriously. The Volpe Center team worked efficiently and were performing all of the tasks I had required in the Statement of Work. In the drafts the team shared with me, the cost benefit analysis found that it was cost beneficial to equip trucks with aerodynamically efficient side protection guards and their adoption should be recommended across all the scenarios that were considered.

In late 2018, I was contacted by the American Trucking Associations (ATA) requesting that I provide them with a briefing on the research projects I was managing. I let my leadership know about their request and received approval. While not part of my formal job description, it was expected of me to speak publicly about my work. I had often traveled to the offices of ATA and made presentations, and this time was no different. I spoke to half a dozen ATA staff in their conference room about several projects, including this one. I was completely transparent with them and did not hold back any details.

During my presentation, one of the ATA staff reacted negatively when I told them that we were going to make a strong recommendation for side guards based on the cost benefit analysis. He said something like, "I don't see why truckers should have to pay for the unsafe practices of others," referring to pedestrians and bicyclists. He also didn't like our counter-intuitive finding that semi-trailers incurred as many crashes with vulnerable road users as single-unit trucks, even though semi-trailers are mostly driven on interstate highways. I believe I provided ATA with a copy of the draft report after that meeting because in my view they had technical expertise on the subject matter of the research done by Volpe. I regularly sought out peer review of the research that I managed. Normally, I obtained peer review from university professors and other neutral parties.

After that presentation, I know that my office director received a call from ATA because he called me into his office and said that ATA had expressed "some concerns" about the side guard study. He asked me if we could tone down the wording of the recommendation, making it less strong. This seemed like a reasonable request to wordsmith and tweak the language of the report. I thought I could tell Volpe to go stronger on voluntary adoption and to let go of any mention of rulemaking to require side guards. I did not think those changes would be consequential, because the critical finding that side guards providing both safety and aerodynamic fuel efficiency are cost effective would still stand and be validated. Anyone with integrity does not fool around with the data and analysis to predetermine a particular conclusion and I wasn't asked by my leadership to do that. I relayed these wordsmithing suggestions to the Volpe Center team, and they were amenable to making those changes.

In late winter 2018 or early spring 2019, I met with a section leader from the National Highway Traffic Safety Administration (NHTSA) of the U.S. DOT named Shashi Kuppa. She was in NHTSA's Office of Crashworthiness, and her areas of research sometimes overlapped with mine. In the meeting, Ms. Kuppa announced that she disagreed strongly with my project's cost benefit analysis for side guards and insisted that according to her own research, they were not cost effective. I was surprised by this because I had not shared my research on side guards with her or with anyone else at NHTSA. She strongly urged me not to release the side guard report. That surprised me too, since she was not in my chain of command and my report was funded by FMCSA, not NHTSA.

May 31, 2019 was my last day of government service. At the time I left U.S. DOT, this research on side guards was complete and all of the required tasks were performed. The only action left was for final review by the agency's leadership. I do not know who was designated by U.S. DOT to take over from me when I left. The published report FMCSA-RRR-19-004 was not released to the public until May 2020, about a year after I retired and more than a year after I received the final report DOT-VNTSC-FMCSA-19-01 from Volpe.

Since retiring I have pursued a master's degree in divinity and have learned two languages, Hebrew and Greek, and I now serve my church as a biblical counselor.

Recently when I read the published report FMCSA-RRR-19-004 on side guards that was posted on the U.S. DOT web site in May 2020, I was shocked and appalled by what I saw. The published report FMCSA-RRR-19-004 does not resemble the final report DOT-VNTSC-FMCSA-19-01 I had worked on when I departed from U.S. DOT. Moreover, the published report does not even fulfill the six required tasks in the official Statement of Work that U.S. DOT contracted with the Volpe Center to do. Most of the chapters, including the critical one on cost benefit

analysis, have been stripped out and the report now is nothing more than just a literature review. The published report also completely left out any discussion of aerodynamic side skirts, which of course was critical to the Statement of Work and benefit-cost analysis. This published report does not fulfill what I hired the Volpe Center to do. What is posted on the U.S. DOT public website as the published report on side guards defrauds the public because the Technical Report Documentation Page indicates that this is the final report of contract no. SA9PAI when clearly it is not; DOT-VNTSC-FMCSA-19-01 is the final report of contract SA9PAI.

I can only speculate how this happened. I do not believe that Volpe Center officials would have done this on their own. But someone at U.S. DOT could have ordered Volpe to "doctor" the final report on side guards and substitute it for the research they were originally hired to perform. Did Shashi Kuppa play a role? Notably, the published report doesn't contain the critical section on cost-benefit analysis that she vehemently opposed. After I retired, she was in a position to act herself or persuade senior officials in the U.S. DOT to quash the Volpe final report and replace it with the doctored, published report.

Suppressing this research was unacceptable and wrong. A new semitrailer costs tens of thousands of dollars, and adding a side guard to it costs mere pennies on the dollar to save an innocent victim's life. I would pay a penny for an engineering solution. The ATA didn't want to do that. The cost of their influence with officials in the U.S. DOT will be borne by many more innocent victims.

More than public safety was harmed. Since the published report does not meet the requirements of the Statement of Work, it was an unacceptable deliverable—it was a mere literature review with no analysis, let alone a critical cost-benefit analysis. U.S. taxpayers did not receive what they paid for. This constitutes waste, fraud, and abuse of taxpayer money. Furthermore, it is one thing to disagree with another professional, but to "doctor" the report of other professionals to suit one's own predetermined conclusion violates scientific integrity and could constitute misconduct.

I am submitting this statement to the Advisory Committee on Underride Protection in order to bring these hidden facts to light and help inform your work, which I understand is to assess the U.S. DOT's progress in advancing underride safety in a report to Congress and recommend policies to the Secretary to protect the public from underride death and injury. I am willing to testify to your committee and answer your questions.

I affirm that this statement is true and complete to the best of my recollection,

Quon Y Kwan  
Quon Kwan

04/11/2024  
Date

Lisa Brenner

[Signature]

4/11/2024

