SUPPLEMENTARY INFORMATION: On May 12, 2009, as part of a comprehensive plan for reducing the serious risk of rollover crashes and the risk of death and serious injury in those crashes, NHTSA published in the **Federal Register** (74 FR 22348) [1] a final rule substantially upgrading Federal Motor Vehicle Safety Standard (FMVSS) No. 216, *Roof Crush Resistance.* The upgraded standard is designated FMVSS No. 216a.

In this document, we correct two errors in that rule. We also identify errors in the preamble to that rule.

We note that we are also publishing two separate documents related to the May 2009 final rule. One is a fuller response to comments submitted by the National Truck Equipment Association on our proposal to upgrade FMVSS No. 216. The other is a response to petitions for reconsideration of the May 2009 final rule.

Correcting Amendments

One of the correcting amendments incorporates a provision that was discussed in the preamble but inadvertently omitted from the regulatory text. As explained in the preamble, the agency decided to exclude a narrow category of multi-stage vehicles from FMVSS No. 216, multi-stage trucks with a GVWR greater than 2,722 kilograms (6,000 pounds) not built using a chassis cab or using an incomplete vehicle with a full exterior van body. We included a specific discussion concerning incomplete vehicles with a full exterior van body in the preamble,[2] but the regulatory text inadvertently omitted the reference to incomplete vehicles with a full exterior van body. We are correcting FMVSS No. 216a by adding that phrase at S3.1(a)(4).

The other correcting amendment corrects a cross-reference to the seat positioning procedure for the 50th percentile male dummy of FMVSS No. 214 *Side Impact Protection.* The reference is included in the introductory text of S7.2 of FMVSS No. 216a. As corrected, S7.2 specifically cross-references the seat positioning procedure for the 50th percentile male ES–2re dummy in S8.3.1 of FMVSS No. 214.

Errors in Preamble

Safety Analysis & Forensic Engineering, LLC (SAFE) brought to our attention errors in the preamble that incorrectly attributed to it the comments of another organization, Safety Analysis, Inc. Both of these organizations submitted comments.

The errors were included in a section of the preamble titled "Roof Crush as a Cause of Injury" beginning at 74 FR 22378, and in the immediately following section titled "Agency Response" at 74 FR 22379. Each of the references to SAFE in these sections should have been attributed to Safety Analysis, Inc. SAFE noted that there is no affiliation between SAFE and Safety Analysis, Inc. and also stated the most of the positions taken by SAFE in its comments are diametrically opposed to the positions taken by Safety Analysis, Inc. We apologize for these errors.

List of Subjects in 49 CFR Part 571

Imports, Motor vehicle safety, Motor vehicles, Rubber and rubber products, and Tires.

■ Accordingly, 49 CFR part 571 is corrected by making the following correcting amendments:

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

■ 1. The authority citation for part 571 of title 49 continues to read as follows:

Authority: 49 U.S.C. 322, 30111, 30115, 30117, and 30166; delegation of authority at 49 CFR 1.50.

■ 2. Section 571.216a is amended by revising S3.1(a)(4) and S7.2 introductory text to read as follows:

§ 571.216a Standard No. 216a; Roof crush resistance; Upgraded standard.

* * * * *

S3.1 *Application.*

(a) * * *

(4) Trucks built in two or more stages with a GVWR greater than 2,722 kilograms (6,000 pounds) not built using a chassis cab or using an incomplete vehicle with a full exterior van body.

* * * * *

S7.2 Adjust the seats in accordance with S8.3.1 of 49 CFR 571.214. Position the top center of the head form specified in S5.2 of 49 CFR 571.201 at the location of the top center of the Head Restraint Measurement Device (HRMD) specified in 49 CFR 571.202a, in the front outboard designated seating position on the side of the vehicle being tested as follows:

* * * * *

Issued on: April 2, 2010.

Stephen R. Kratzke,

Associate Administrator for Rulemaking.

[FR Doc. 2010–7909 Filed 4–6–10; 8:45 am]

BILLING CODE 4910–59–P

[1] Docket No. NHTSA–2009–0093.

[2] 74 FR at 22373.

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA–2009–0093]

Federal Motor Vehicle Safety Standards; Roof Crush Resistance

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation.

ACTION: Final rule; response to petitions for reconsideration.

SUMMARY: This document responds to two petitions for reconsideration of a May 12, 2009 final rule that upgraded the agency's safety standard on roof crush resistance. The first petition requested the agency to reconsider its decision to apply a lower roof strength-to-weight ratio requirement to heavier light vehicles, *i.e.,* ones with a gross vehicle weight rating greater than 2,722 kilograms (6,000 pounds), than to other light vehicles. The second requested reconsideration of that decision as well as the agency's decision not to adopt a dynamic rollover test requirement as part of this rulemaking. After carefully considering the petitions, we are denying them. This document also responds to supplemental requests made by the petitioners.

FOR FURTHER INFORMATION CONTACT: For non-legal issues, you may call Christopher J. Wiacek, NHTSA Office of Crashworthiness Standards, telephone 202–366–4801. For legal issues, you may call J. Edward Glancy, NHTSA Office of Chief Counsel, telephone 202–366–2992. You may send mail to these officials at the National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., West Building, Washington, DC 20590.

SUPPLEMENTARY INFORMATION:

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I. Background

On May 12, 2009, as part of a comprehensive plan for reducing the serious risk of rollover crashes and the risk of death and serious injury in those crashes, NHTSA published in the **Federal Register** (74 FR 22348) a final rule [1] substantially upgrading Federal Motor Vehicle Safety Standard (FMVSS) No. 216, *Roof Crush Resistance.*

First, for the vehicles currently subject to the standard, *i.e.,* passenger cars and multipurpose passenger vehicles, trucks and buses with a Gross Vehicle Weight Rating (GVWR) of 2,722 kilograms (6,000 pounds) or less, the rule doubled the amount of force the vehicle's roof structure must withstand in the specified test, from 1.5 times the vehicle's unloaded weight to 3.0 times the vehicle's unloaded weight. We note that this value is sometimes referred to as the strength-to-weight ratio (SWR), e.g., a SWR of 1.5, 2.0, 2.5, and so forth.

Second, the rule extended the applicability of the standard so that it will also apply to vehicles with a GVWR greater than 2,722 kilograms (6,000 pounds), but not greater than 4,536 kilograms (10,000 pounds). The rule established a force requirement of 1.5 times the vehicle's unloaded weight for these newly included vehicles.

Third, the rule required all of the above vehicles to meet the specified force requirements in a two-sided test, instead of a single-sided test, *i.e.,* the same vehicle must meet the force requirements when tested first on one side and then on the other side of the vehicle. Fourth, the rule established a new requirement for maintenance of headroom, *i.e.,* survival space, during testing in addition to the existing limit on the amount of roof crush. The rule also included a number of special provisions, including ones related to leadtime, to address the needs of multi-stage manufacturers, alterers, and small volume manufacturers.

The rulemaking action to improve roof strength was part of our comprehensive plan for addressing the serious problem of rollover crashes. There are more than 10,000 fatalities in rollover crashes each year. To address that problem, our comprehensive plan includes actions to: (1) Reduce the occurrence of rollovers, (2) mitigate ejection, and (3) enhance occupant protection when rollovers occur (improved roof crush resistance is included in this third category). A more complete discussion of our plan was included in the preamble to the May 2009 roof crush resistance final rule (74 FR 22348).

The roof crush final rule, by itself, addressed a relatively small subset of that problem. Our analysis shows that of the more than 10,000 fatalities, roof strength is relevant to only about seven percent (about 667) of those fatalities. We estimated that the May 2009 rule will prevent 135 of those 667 fatalities.

The portions of our comprehensive plan that will have the highest life-saving benefits are the ones to reduce the occurrence of rollovers (prevention) and to mitigate ejection (occupant containment). We estimate that by preventing rollovers, electronic stability control (ESC) will reduce the more than 10,000 fatalities that occur in rollover crashes each year by 4,200 to 5,500 fatalities (and also provide significant additional life-saving benefits by preventing other types of crashes). In the area of mitigating ejection, significant life-benefits are and/or will occur by our continuing efforts to increase seat belt use and our rulemaking on ejection mitigation. We note that on December 2, 2009, we published in the **Federal Register** (74 FR 63180) a notice of proposed rulemaking (NPRM) to establish a new safety standard to reduce the partial and complete ejection of vehicle occupants through side windows in crashes, particularly rollover crashes.

II. Petitions for Reconsideration

We received two petitions for reconsideration. One was jointly submitted by Advocates for Highway and Auto Safety, Center for Auto Safety, Consumer Federation of America and Ms. Joan Claybrook. We will refer to these petitioners jointly as "Advocates *et al.*" in the rest of this document. The other petition was submitted by the Center for Injury Research (CfIR).[2]

Advocates *et al.* requested reconsideration of the agency's decision to apply a lower SWR requirement to vehicles with a GVWR greater than 2,722 kilograms (6,000 pounds) than to lighter vehicles (1.5 SWR vs. 3.0 SWR).

These petitioners argued that NHTSA's overall rationale for the 1.5 SWR requirement is inadequate, and that the agency has a duty to provide uniform, equal levels of safety protection to vehicle occupants in all light vehicles without regard to distinctions based on what they consider to be arbitrary factors such as vehicle weight. They specifically argued that the agency did not establish any specific standard for judging the reasonableness of the costs involved in increasing the stringency of the SWR for vehicles greater than 2,722 kilograms (6,000 pounds).

Advocates *et al.* made a variety of additional arguments in support of their request, including ones related to how the agency has addressed reasonableness of costs in a prior rulemaking, a claim that the consequences of inadequate roof protection for larger vehicles is more severe than for light passenger vehicles, concerns about 15-passenger vans, National Transportation Safety Board (NTSB) investigations and recommendations, and a claim that the agency's cost-benefit analysis underestimates the number of lives that could be saved by much stronger roofs.

CfIR asked us to reconsider the final rule with respect to the lower SWR requirement for heavier light vehicles, and also with respect to our decision not to adopt a dynamic test. That petitioner cited three basic reasons for NHTSA to reconsider the final rule. First, it argued that the quasi-static test and criteria does not reasonably differentiate between the injury risk of compliant and non-compliant vehicles. Second, CfIR argued that contrary to NHTSA assertions, the Jordan Rollover System (JRS) dynamic test has been available for two years and extensive data submissions show it to be reliable, repeatable, validated to real world rollover injury risk and accurate in assessing comparative injury potential performance. Third, CfIR argued that drivers and passengers of heavier light vehicles up to 4,536 kilograms (10,000 pounds) GVWR deserve the same rollover protection as occupants of vehicles with a GVWR of 2,722 kilograms (6,000 pounds) or less. This petitioner argued that these heavier vehicles are often less stable, occupants are more vulnerable and the vehicles are used more frequently in off-road transportation.

In its petition, CfIR cited numerous submissions it had made to the docket. This petitioner requested that the agency review the data previously

[1] Docket No. NHTSA–2009–093.

[2] Petitions for reconsiderations are available in Docket No. NHTSA–2009–093.

submitted and summarized in its petition and consider the following actions: adjust the rule to allow for an alternate dynamic compliance test, propose and allow for an alternative dynamic test for the agency's New Car Assessment Program (NCAP) ratings, allow for non-compliance or compliance exceptions based on submitted dynamic test evidence, correct statements made by the agency regarding the JRS' repeatability and reliability in testing a vehicle's dynamic performance that the petitioner considers to be misleading and inaccurate, and apply the same SWR for lighter vehicles to heavier vehicles with passenger seating positions of three or more. CfIR also claimed that the agency made errors with respect to the target population used to identify benefits and in addressing the effect of roof racks on the strength of the roof.

In September 2009, CfIR submitted a document it called a "supplement" to its petition for reconsideration. It attached a document discussing JRS test results which it said indicate that an SWR of 4.1 is required to minimize roof crush injury potential. CfIR stated that it requested reconsideration of JRS dynamic testing for the final rule for two reasons: (1) Insurance Institute for Highway Safety's [3] (IIHS) SWR of 4 or greater has gained industry acceptance and timely voluntary compliance, and (2) the JRS test fixture accurately measures post crash negative headroom and can assess the injury potential of occupant protection systems. It stated that its supplement requests further (1) raising the static test criteria to the dynamically derived SWR criteria of 4, and (2) initiating a dynamic rollover crashworthiness NCAP program using the JRS fixture.

CfIR also provided the agency a copy of a document titled "Scientific Review & Evaluation of the Jordan Rollover System (JRS) Impact Crash Test Device." [4]

III. Today's Document and Related Actions

In this document, we provide our response to the petitions for reconsideration of the May 2009 final rule upgrading FMVSS No. 216.

We are also publishing two separate documents related to the May 2009 final rule. One is a fuller response to comments submitted by NTEA on our proposal to upgrade FMVSS No. 216. The other is a correcting rule. The correcting rule incorporates a provision that was discussed in the preamble but inadvertently omitted from the regulatory text. As explained in the preamble, the agency decided to exclude a narrow category of multi-stage vehicles from FMVSS No. 216 altogether, multi-stage trucks with a GVWR greater than 2,722 kilograms (6,000 pounds) not built on either a chassis cab or an incomplete vehicle with a full exterior van body. The regulatory text inadvertently omitted the reference to incomplete vehicles with a full exterior van body.

IV. Response to Petitions

After carefully considering the two petitions, we have decided to deny them. The reasons for our denial are set forth below. Our discussion is divided into two main sections, one addressing issues related to the lower SWR requirement for heavier light vehicles and the other addressing issues related to our decision to adopt a quasi-static test requirement.

A. Request That All Vehicles With a GVWR Not Greater Than 4,536 Kilograms (10,000 pounds) Be Required To Meet a 3.0 SWR

1. May 2009 Final Rule Discussion

In our May 2009 final rule, we adopted an SWR requirement of 3.0 for vehicles with a GVWR of 2,722 kilograms (6,000 pounds) or less, and 1.5 for vehicles with a GVWR greater than 2,722 kilograms (6,000 pounds) and less than or equal to 4,536 kilograms (10,000 pounds).

In the preamble to that document, we explained that while the rulemaking involved a number of key decisions, the selection of an SWR requirement was the most important one for both costs and benefits. We note that our analysis, presented in detail in the Final Regulatory Impact Analysis (FRIA), showed that for the alternatives we evaluated, benefits in terms of reduced fatalities continued to rise with higher SWR levels due to reduced intrusion. For vehicles designed to have higher SWR levels, the benefits continued to rise because the vehicle roofs experience less intrusion in higher severity crashes. We explained further, however, that costs also increase substantially with higher SWR levels, so NHTSA needed to select the appropriate balance of safety benefits to added costs.

We explained that under the Safety Act, NHTSA must issue safety standards that are both practicable and meet the need for motor vehicle safety. 49 U.S.C. § 30111(a). The agency considers economic factors, including costs, as part of ensuring that standards are reasonable, practicable, and appropriate.

In Motor Vehicle Manufacturers Association v. State Farm, 463 U.S. 29, 54–55 (1983), the Supreme Court indicated that the agency was correct, in making its decisions about safety standards, to consider reasonableness of monetary and other costs associated with the standards. With respect to the agency's future revisiting of its earlier conclusion that the cost of detachable automatic seat belts was unreasonable in relation to the expected benefits from such belts, the Court stated, however, that "(i)n reaching its judgment, NHTSA should bear in mind that Congress intended safety to be the preeminent factor under the Motor Vehicle Safety Act:"

> "The Committee intends that safety shall be the overriding consideration in the issuance of standards under this bill. The Committee recognizes * * * that the Secretary will necessarily consider reasonableness of cost, feasibility and adequate leadtime." S.Rep. No. 1301, at 6, U.S. Code Cong. & Admin. News 1966, p. 2714.
>
> "In establishing standards the Secretary must conform to the requirement that the standard be practicable. This would require consideration of all relevant factors, including technological ability to achieve the goal of a particular standard as well as consideration of economic factors. Motor vehicle safety is the paramount purpose of this bill and each standard must be related thereto." H.Rep. No. 1776, at 16.

We explained that, in making our decision concerning SWR, we were guided by the statutory language, legislative history, and the Supreme Court's construction of the Safety Act, as well as by the specific requirement in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU) for us to upgrade FMVSS No. 216 relating to roof strength for driver and passenger sides for motor vehicles with a GVWR of not more than 4,536 kilograms (10,000 pounds). We explained that we considered both costs and benefits, bearing in mind that Congress intended safety to be the preeminent factor under the Safety Act.

As indicated above, our analysis showed that while benefits continued to rise with higher SWR levels, costs also increase substantially. We explained that the challenge was to push to a level where the safety benefits are still reasonable in relation to the associated costs. We explained further that, as part

[3] In March 2009, the IIHS launched a new roof strength rating system. According to the IIHS, a metal plate is pushed against one side of a roof at a constant speed. To earn a good rating, the roof must withstand a force of 4 times the vehicle's weight before reaching 5 inches of crush. This is called a strength-to-weight ratio. For an acceptable rating, the minimum required strength-to-weight ratio is 3.25. A marginal rating value is 2.5. Anything lower than that is poor. *http://www.iihs.org/news/rss/pr032409.html*

[4] Available in Docket No. NHTSA–2009–093.

of this, we considered issues related to cost effectiveness. We noted that the agency's analysis of cost effectiveness was presented in the FRIA and summarized in the preamble.

We also explained that another important factor in the selection of the SWR requirements was that there are much higher costs relative to benefits associated with any level SWR requirement for vehicles with a GVWR greater than 2,722 kilograms (6,000 pounds) as compared to the lighter vehicles that were already subject to the standard.

We noted that there are a number of reasons for this differential between heavier and lighter vehicles. The absolute strength needed to meet a specific SWR is a function of the vehicle's unloaded weight. By way of example, to meet a 2.0 SWR, an unloaded vehicle that weighs 1,360 kilograms (3,000 pounds) must have a roof structure capable of withstanding 26,690 N (6,000 pounds) of force, while an unloaded vehicle that weighs 2,268 kilograms (5,000 pounds) must have a roof structure capable of withstanding 44,482 N (10,000 pounds) of force. This means more structure or reinforcement are needed for the heavier vehicle, which means more cost and weight. Moreover, vehicles in the heavier category have not previously been subject to FMVSS No. 216, so they have not been required to meet the existing 1.5 SWR single-sided requirement.

We also noted that, at the same time, these heavier vehicles account for only a very small part of the target population of occupants who might benefit from improved roof strength. Only 5 percent of the fatalities in the overall target population (33 in terms of a specific number) occur in vehicles over 2,722 kilograms (6,000 pounds) GVWR. Ninety-five percent of the fatalities (635 in terms of a specific number) occur in vehicles under 2,722 kilograms (6,000 pounds) GVWR. These differences reflect the fact that there are far fewer vehicles in this category in the on-road fleet, and may reflect their frequency of use as working vehicles.

We stated that we recognized the argument that all light vehicles should meet the same SWR requirements, to ensure the same minimum level of protection in a rollover crash. We explained, however, that in selecting particular requirements for a final rule, we believed that our focus needed to be on saving lives while also considering costs and relative risk. We stated (74 FR 22360):

> What is necessary to meet the need for safety and is practicable for one type or size of vehicle may not be necessary or reasonable, practicable and appropriate for another type or size of vehicle. Thus, to the extent the goal of establishing the same SWR requirements for all light vehicles would have the effect of either unnecessarily reducing the number of lives saved in lighter vehicles or imposing substantially higher, unreasonable costs on heavier vehicles despite their lesser relative risk, we believe it is appropriate to adopt different requirements for different vehicles. We also observe that because the same SWR requirement is significantly more stringent for heavier vehicles than lighter vehicles (due to SWR being a multiple of unloaded vehicle weight), establishing the same SWR requirement for heavier vehicles is not simply a matter of expecting manufacturers to provide the same countermeasures as they do for light vehicles.

We included specific explanations as to why we adopted a 3.0 SWR requirement for vehicles with a GVWR of 2,722 kilograms (6,000 pounds) or less and a 1.5 SWR requirement for vehicles with a GVWR greater than 2,722 kilograms (6,000 pounds).

While we will not repeat all of the details of the reasons we provided for our decision concerning the 3.0 SWR required for vehicles with a GVWR of 2,722 kilograms (6,000 pounds) or less, we noted that an SWR requirement of 3.0 prevented about 66 percent more fatalities than one at 2.5, 133 instead of 80. However, costs increased by a considerably higher percentage, resulting in a less favorable cost per equivalent life saved, $5.7 million to $8.5 million for 3.0 SWR as compared to $3.8 million to $7.2 million for 2.5 SWR. We explained that in these particular circumstances, we believed that a 3.0 SWR requirement was appropriate and the costs reasonable given the increased benefits. We explained that while the cost per equivalent life saved was relatively high compared to other NHTSA rulemakings, we concluded that the higher safety benefits, the legislative mandate for an upgrade, the technical feasibility of making roofs this strong, and the fact that these costs were generally within the range of accepted values justified moving NHTSA's roof crush standards to a 3.0 SWR for vehicles that have been subject to the 1.5 SWR requirements.

As to vehicles with a GVWR greater than 2,722 kilograms (6,000 pounds), we noted that these vehicles are not currently subject to FMVSS No. 216 and, because of their greater unloaded vehicle weight, these vehicles posed greater design challenges. These heavier vehicles also tend to have greater variations in packaging options (4-wheel drive, extended/crew cabs, engine size, etc.) which span a larger range of unloaded vehicle weights for a given body design. In response to the NPRM, vehicle manufacturers noted that to minimize their manufacturing tooling costs, they would need to design their roof strength performance to the worst-case weight for a given model line. We also noted that given the relatively small target population for these vehicles, the benefits will necessarily be small regardless of the SWR selected.

We explained that after considering our original proposal of a SWR of 2.5 and the available information, we concluded that a SWR of 1.5 was appropriate for these heavier vehicles. We noted that the requirement we were adopting is more stringent than the longstanding requirement that has applied to lighter vehicles until this rulemaking because it is a two-sided requirement. The FRIA estimated that two fatalities and 46 nonfatal injuries will be prevented annually by this requirement. We stated that because of the high cost relative to the benefits for all of the alternatives for these heavier vehicles, from the 1.5 SWR alternative and above, any alternative we select would adversely affect the overall cost effectiveness of this rulemaking (covering all light vehicles).

We stated that we believed that a SWR of 1.5 is appropriate for these heavier vehicles. We stated that given the requirements of SAFETEA–LU, we needed to ensure that the standard results in improved real world roof crush resistance for these vehicles. We declined, however, to adopt a SWR higher than 1.5 for vehicles with a GVWR greater than 2,722 kilograms (6,000 pounds), given the small additional benefits (4 additional lives saved and 137 nonfatal injuries prevented) and substantially higher costs. We explained that adopting a SWR of 2.0 for these vehicles would more than double the costs of the rule for these vehicles.

2. Overall Rationale for Request and Petitioners' Argument Concerning Costs

In their petition for reconsideration, Advocates *et al.* argued that the agency's rationale for a SWR of 1.5 for heavier light vehicles is inadequate. While they conceded that cost burdens are a consideration to be taken into account, these petitioners claimed that the agency had unwarrantedly elevated cost considerations above the need to secure substantial increases in benefits for people involved in rollover crashes in light vehicles above 2,722 kilograms (6,000 pounds) GVWR.

While the petitioners acknowledged the agency's discussion of the Supreme Court's decision in *Motor Vehicle*

Manufacturers Association v. *State Farm,* they argued that NHTSA did not establish any specific standard for judging the reasonableness of costs involved in increasing the stringency of the SWR for vehicles greater than 2,722 kilograms (6,000 pounds). They stated that the point at issue, whether the costs are reasonable with respect to higher SWR levels for these vehicles, was not independently established by an appeal to any specific, recognized test that the agency sets forth for objective assessment of "what costs are tolerable for gaining additional safety benefits."

While we believe that the basis for our decision concerning SWR was adequately presented and explained in the final rule, we will provide a more detailed discussion in responding to the petitions for reconsideration.

We begin by elaborating on our earlier discussion of the Supreme Court's statement in *State Farm* that safety is the pre-eminent factor in vehicle safety rulemaking. We note that neither the Court nor the passages of legislative history it quoted suggested that the pre-eminence of safety considerations leaves no significant role for other considerations to influence rulemaking decisions. The Court's opinion, as well as each of the two passages of legislative history, all emphasize that it is necessary and appropriate to consider costs as well as other non-safety factors, in making those decisions. We take the pre-eminence of safety to mean that strict considerations of economic efficiency do not govern vehicle safety rulemaking. We do not, however, understand it to mean that we must establish requirements whose benefits are mathematically significantly disproportionate to their costs, especially when the costs are large in absolute terms.

As to the suggestion that we establish a specific numerical test for determining whether costs are reasonable in relation to likely benefits and apply it across the board to particular rulemakings, regardless of their individual circumstances, we decline to do so. Adoption of a formulaic calculus of decisionmaking would preclude a careful, fact-based assessing and weighing of competing considerations. We must consider all relevant factors in the context of the facts in any particular rulemaking, and therefore cannot consider safety in isolation or without due regard to those other factors.

We can, however, identify the types of facts that lead us to give careful scrutiny to reasonableness of costs in a rulemaking, and which lead us to place increased weight on this factor as we consider all other relevant factors in reaching a particular decision. Specifically, we give scrutiny to the issue of reasonableness of costs in rulemakings where our analyses indicate that either the overall rulemaking, or a significant portion of the rulemaking, is borderline with respect to whether it is cost beneficial, *i.e.,* whether the benefits of the rulemaking exceed the costs. Moreover, in situations where either the overall rulemaking or a significant portion of the rulemaking appears likely to result in net disbenefits, *i.e.,* net losses, our scrutiny increases as the size of the potential net disbenefits increases, and the weight we accordingly place on this factor increases.

The agency did weigh the competing considerations and relevant factors for this rule. Although Advocates *et al.* argue that the agency merely cited the fact that there are increased costs, the agency presented detailed cost-effectiveness and benefit-cost analyses in its FRIA for the roof crush resistance final rule and summarized those analyses in the preamble. Among other items, these analyses looked at the number of fatalities that the rule would prevent. In fact, in the FRIA, NHTSA published a table summarizing costs and benefits for various SWR alternatives (1.5, 2.0, 2.5, 3.0, 3.5). The agency also considered one-sided and two-sided tests. *See* FRIA, pp. 125–134. Based on the analysis of the alternatives in the FRIA and after considering the comments received, the agency changed the SWR requirement from that included in the proposal. In the NPRM, the agency included a 2.5 SWR, one-sided requirement for all vehicles with a GVWR of 4,536 kilograms (10,000 pounds) or less. While the agency lowered the SWR requirement, as compared to the NPRM, to 1.5 for the heavier light vehicles in the final rule, the agency actually raised the SWR to 3.0 for vehicles with a GVWR of 2,722 kilograms (6,000 pounds) or less. This was done, in part, because doing so would prevent significantly more fatalities.

In an effort to respond to the petition of Advocates *et al.,* the agency is including a recitation of how the agency came to its conclusions relating to the change in SWR. As with any rule, the estimates of cost effectiveness rely on a number of important inputs and calculations.[5] For example, the cost effectiveness of the rule was estimated for each alternative using both 3% and 7% discount rates. The net benefits for each alternative represent the difference between total costs and the total monetary value of benefits.

In order to calculate net benefits, it is necessary to use a value per statistical life saved (VSL). Guidance from the Office of the Secretary of Transportation (OST) specifies a value of $5.8 million, with recommendations that values of $3.2 million and $8.4 million also be considered to account for uncertainty. We note that this guidance is available on the OST Web site.[6] We also note that the value of $5.8 million was adopted in February 2008 and represented an increase from an earlier value of $3.0 million that had been adopted in January 2002.

The monetary value of benefits used by NHTSA also included $300,000 in economic costs prevented. Thus, for our primary estimates, the monetary value of benefits was estimated by assigning a value of $6.1 million to each equivalent fatality prevented.

The FRIA includes cost-effectiveness and benefit-cost analyses for various alternatives considered by the agency. As noted in the preamble, nearly all alternatives covering vehicles from 2,723 and 4,536 kilograms (6,001 and 10,000 pounds) GVWR yield net losses rather than net savings to society. The agency's specific estimates of net benefits for two-sided test requirements with alternative SWRs are presented in the following table.[7]

NET BENEFITS; VEHICLES > 2,722 KILOGRAMS (6,000 POUNDS); 2-SIDED TESTS; $5.8 MILLION VSL*

SWR alternative	Net benefits
1.5	$55 million to $180 million.
2.0	$123 million to $547 million.
2.5	$590 million to $1,189 million.
3.0	$1,280 million to $2,136 million.

*Based on $5.8 million VSL plus $300,000 economic costs.

This table shows that for light vehicles with a GVWR greater than

[5] It is important to note that many benefit and cost calculations changed between publication of the PRIA and FRIA. These changes are detailed in the FRIA. For example, the agency's inputs changed due to the increased use of electronic stability control and for increased seat belt use. The agency also made adjustments to calculations of costs. For example, the agency's cost inputs changed because the agency received more information concerning vehicle weight.

[6] *http://ostpxweb.dot.gov/policy/reports/080205.htm.*

[7] See Table VII–4 of the FRIA. We note that NHTSA identified minor errors in Table VII–4. The agency is placing a corrected table in the docket. The numbers presented in this document are the corrected numbers.

2,722 kilograms (6,000 pounds), all of these alternative SWRs, including the one we adopted, result in net losses to society, and also that net losses increase by a substantial amount at each higher alternative. For example, it is clear that going successively to each alternative above 1.5 can result in additional hundreds of millions of dollars of net losses. The net losses from the 3.0 SWR alternative, the one advocated by the petitioners, would be well in excess of a billion dollars.

We also note that consideration of uncertainties related to VSL does not significantly affect these numbers. The net losses are slightly higher using a VSL of $3.2 million and slightly lower using a VSL of $8.4 million. *See* Tables VII–5 and VII–6 of the FRIA. However, even using a VSL of $8.4 million, the net losses are $50 million to $174 million for an SWR of 1.5 and $101 million to $524 million for an SWR of 2.0, and continue to rise substantially for higher SWRs.

The FRIA presents cost-effectiveness and benefit-cost analyses in a number of different ways, including calculations of cost per equivalent life saved for different alternatives. The cost per equivalent life saved for all of the alternatives identified in the table above is well above the range of plausible VSL, *i.e.,* the range where they would be considered cost-beneficial. *See* Table VII–3 of the FRIA. We note that, while well above this range, the cost per equivalent life saved is slightly less disfavorable for a 2.0 SWR than a 1.5 SWR ($18.8 million to $72.0 million vs. $27.9 million to $90.3 million). However, given the small number of additional benefits and the substantially higher costs associated with the 2.0 SWR alternative, the net losses for this alternative are substantially higher than for the 1.5 SWR alternative ($123 million to $547 million vs. $55 million to $180 million). The cost per equivalent life saved for an SWR of 3.0 would be $88.4 million to $140.0 million.

NHTSA and other agencies evaluate cost-effectiveness and benefit-cost analyses as part of ensuring that they and the public are fully aware of the consequences of their rulemaking decisions. Societies have limited resources and many alternative ways of using those resources, including many alternative ways of reducing risks. To the extent that various regulatory alternatives result in increasingly high costs to achieve limited safety benefits and net losses to society rather than net benefits, they raise the issue of whether those societal resources could better be used elsewhere, especially when the net losses are substantial. While NHTSA has always placed primary importance on safety benefits, it has never considered safety without regard to cost implications.

In our May 2009 final rule, we adopted a SWR of 1.5 for the heavier light vehicles despite the fact that, at this level, our analyses showed that there would be net losses to society. The reasons for this are cited above. We declined, however, to adopt a SWR higher than 1.5 for vehicles with a GVWR greater than 2,722 kilograms (6,000 pounds). As we stated in the FRIA, "the cost/equivalent fatality for vehicles over 6,000 lbs. GVWR is roughly 12–16 times that for the lighter vehicles at any given SWR."[8]

The costs of the rule for these vehicles are substantial at 1.5 SWR, *i.e.,* $70.9 million to $195.0 million, and would increase to $182.3 million to $605.9 million for an SWR of 2.0. *See* Table VII–2 of the FRIA. Moreover, as noted above, given the small number of additional benefits and the substantially higher costs associated with the 2.0 SWR alternative, the net losses to society for this portion of the rulemaking would increase from the range of $55 million to $180 million for the 1.5 SWR alternative to the range of $123 million to $547 million for the 2.0 SWR alternative. Also, the increased net losses for still higher SWRs would be very substantial, *e.g.,* well in excess of a billion dollars for SWR of 3.0. Given the small number of additional benefits, the magnitude of the net losses to society, and given how far outside the range of cost per equivalent life that would ordinarily be considered to be cost-beneficial, we believe our decision not to adopt an SWR higher than 1.5 for these vehicles is reasonable, and we do not accept these petitioners' argument that the agency unwarrantedly elevated cost considerations above safety.

Advocates *et al.* also claimed that NHTSA had previously reached a significantly different result in similar circumstances, citing the agency's 1995 rule amending FMVSS No. 201, *Occupant Protection in Interior Impact,* to require light vehicles to provide protection when an occupant's head strikes upper interior components. They specifically cited the agency's decision to include components in the rear seating area of light trucks and vans (LTVs), despite a great disparity in the costs per equivalent life saved between preventing fatalities in front seat areas and preventing fatalities in rear seat areas, and despite a very high cost per equivalent life saved for the latter areas.

[8] FRIA at p. 120.

As indicated earlier, we decline to define or otherwise adopt any specific numerical test related to costs and benefits as determinative as to whether costs are reasonable or not. We instead consider all relevant factors in any particular rulemaking, and do not consider this factor in isolation. Moreover, NHTSA rulemakings where either the overall rulemaking or a signification portion of the rulemaking is borderline with respect to whether the benefits exceed the costs or where there may appear to be net disbenefits are rare. For these reasons, and in light of the unique nature of the issues involved in such rulemakings, we do not consider the specific decisions we reach in one of these rulemakings to be directly comparable to other rulemakings. We note that while the overall FMVSS No. 201 rulemaking was highly cost-beneficial, the overall FMVSS No. 216 rulemaking is not.[9] We also note that the agency decided in the former rulemaking that coverage of the rear seat areas was particularly necessary because children are disproportionately likely to be seated in the rear, instead of the front, seating area and would be subject to head injuries unless the rear seating areas were included.

3. Petitioners' Argument Concerning Equity

Advocates *et al.* made arguments related to equity. They claimed that it is inequitable to those who travel in large vans and large sport utility vehicles (SUVs) for those vehicles to be subject to a lower standard for roof crush resistance safety. They noted that the agency proposed an SWR of 2.5 for all light vehicles, and the petitioners claimed that the agency "reneged on the need to provide equal safety for all light motor vehicle occupants in the final rule." CfIR argued that drivers and passengers of light trucks, SUVs and vans to 4,536 kilograms (10,000 pounds) GVWR deserve the same rollover protection as occupants of 2,722 kilograms (6,000 pounds) GVWR vehicles. It stated that trucks, SUVs and vans which accommodate four to 15 passengers are primarily used by commercial operators, schools, social groups, and non-profit entities.

In responding to these arguments, we note that we explained in the final rule preamble that while we recognized the argument that all light vehicles should meet the same SWR requirements, to ensure the same minimum level of

[9] Adjusted to 2007 economics, the cost per equivalent life saved for the overall FMVSS No. 201 rulemaking was $1.1 million to $1.3 million.

protection in a rollover crash, we believed in selecting particular requirements for a final rule that our focus needed to be on saving lives while also considering costs and relative risk. We stated that what is necessary to meet the need for safety and is practicable for one type or size of vehicle may not be necessary or reasonable, practicable and appropriate for another type or size of vehicle.

We explained further that, to the extent the goal of establishing the same SWR requirements for all light vehicles would have the effect of either unnecessarily reducing the number of lives saved in lighter vehicles or imposing substantially higher, unreasonable costs on heavier vehicles despite their lesser relative risk, we believed it was appropriate to adopt different requirements for different vehicles.

NHTSA considers all relevant factors, including, where appropriate, special concerns. As noted above, in a FMVSS No. 201 rulemaking, the agency decided that it was particularly necessary to protect children, who are often seated in the rear and who would be susceptible to head injuries unless the rear seating areas were included.

The agency has never, however, adopted a position that identical safety requirements should apply to all light vehicles or at all seating positions regardless of considerations such as relative risks and costs. The Vehicle Safety Act requires us to issue standards that meet the need for motor vehicle safety. For any given aspect of vehicle safety performance, the need for motor vehicle safety, which is defined in the Act in terms of unreasonable risk, varies by type and size/weight of vehicle, as well as by other factors. Given those differences in risk, the type and level of regulation that is reasonable, practicable and appropriate for one vehicle type may differ from that for another vehicle type. Moreover, we believe that adopting an inflexible position of identical requirements regardless of the particular circumstances would be contrary to public safety. Such a position, in combination with the fact that often some light vehicles have greater compliance difficulties than other light vehicles and thus might not be able to achieve as high a level of performance as those other vehicles, could force the adoption of lower, less protective requirements for all light vehicles.

Given these considerations, we do not accept the petitioners' arguments concerning equity.

4. Consequences of Lower Roof Crush Protection for Heavier Light Vehicles and Documentation From NTSB

Advocates *et al.* argued that the consequences of what they term inadequate roof crush protection for large light truck and van occupants are more severe than for light passenger vehicles. They also argued that NTSB comments, investigations, and recommendations document the serious occupant risks of death and injury in large van rollover crashes.

The petitioners stated that the greater weight of the heavier vehicle places higher loads on the roof and roof supports during a rollover. They also stated that certain heavier passenger vehicles will be even more inadequately protected from intrusive roof crush in rollover crashes than lighter passenger vehicles because they have long roofs and multi-row seating, especially 8-occupant large SUVs, and 12- and 15-passenger vans. They stated that the specified test requirements do not test the crush resistance of C-, D- and E-pillars of heavier, longer passenger vehicles.

Advocates *et al.* also noted that NHTSA has published repeated advisories and research analyses warning of the very high rollover propensity of 15-passenger vans. They stated in its latest research note, titled *Fatalities to Occupants of 15-Passenger Vans, 2003–2007,*[10] NHTSA stressed that "15-passenger vans with 10 or more occupants had a rollover rate in single vehicle crashes that is nearly three times the rate of those that had fewer than five occupants." They also noted that the research report indicated that, in 2007, fatalities of occupants of 15-passenger vans increased nearly 20 percent from the previous year, as well as other data from that report.

The petitioners stated that NTSB also emphasized the need for much stronger roofs in heavy passenger vans both in its accident reports and in its comments filed with NHTSA rulemaking dockets on passenger vehicle roof crush resistance. Advocates *et al.* stated that in commenting on NHTSA's NPRM to amend FMVSS No. 216, NTSB pointed out that heavier vehicles such as 12- and 15-passenger vans, not subjected to the roof strength standard, were experiencing patterns of roof intrusion greater than vehicles already subject to the requirements and cited two investigations it conducted concerning the safety need for vehicles between 2,722 and 4,536 kilograms (6,000 and 10,000 pounds) GVWR to meet roof crush resistance requirements. These petitioners included a discussion of these investigations, and asserted that NHTSA's roof crush final rule does not fulfill NTSB recommendations for vans and heavier vehicles.

In reaching its decision on the roof crush final rule, NHTSA carefully considered the consequences of alternative SWR requirements for the heavier light vehicles. As discussed above, as part of this, the agency conducted a detailed analysis of the benefits and costs at alternative SWR levels, which is presented in detail in the agency's FRIA. Among other things, the agency conducted a detailed analysis of the target population of occupants who would be likely to benefit from a stronger roof due to an upgrade of FMVSS No. 216, and how they would benefit from stronger roofs meeting alternative SWR level requirements.

While we adopted, for reasons discussed in the final rule preamble (and also discussed above), a lower SWR level for the heavier light vehicles than for ones with a GVWR of 2,722 kilograms (6,000 pounds) or less, the 1.5 SWR requirement we adopted is more stringent than the longstanding requirement that has applied to lighter vehicles until this rulemaking. The standard now requires a two-sided test. We also note that since the amount of force that a vehicle's roof must withstand in the specified test is a multiple of the vehicle's unloaded weight, *e.g.,* 1.5 times the unloaded weight of the vehicle, the amount of force that is applied to a vehicle's roof is higher for heavier vehicles than lighter vehicles at any constant SWR.

Advocates *et al.* raised specific issues concerning the safety of larger passenger vans. We note that, as discussed in the May 2009 research note [11] they cited, and in documents referenced by that note, NHTSA developed a specific action plan for 15-passenger van safety. In September 2003, the agency published the *NHTSA Action Plan for 15-Passenger Van Safety.* It described a number of research programs, consumer information activities and potential regulatory actions with which NHTSA intended to address the safety of 15-passenger van users. The plan was updated in November 2004 and the most recent update to the plan was

[10] *Fatalities to Occupants of 15-Passenger Vans, 2003–2007,* Traffic Safety Facts: Research Note, DOT HS 811 143, National Highway Traffic Safety Administration, May 2009, at page 5.

[11] The research note available on NHTSA's Web site at *http://www-nrd.nhtsa.dot.gov/Pubs/811143.PDF.*

prepared in April 2008.[12] The action plan is discussed at pp. 4 to 5 of the referenced May 2009 research note.[13]

Occupant protection for 12- and 15-passenger van continues to be an agency priority and, as a result of the agency's rulemaking to upgrade FMVSS No. 216, these vehicles will for the first time be required to comply with FMVSS No. 216. The May 2009 research note indicated that fatalities, both total and in vans that rolled over, have been on a declining trend since 2001. As noted by the petitioner, there was an increase in 2007; however, we expect that the safety benefits that will occur as a result of new regulatory requirements adopted in connection with the agency's action plan for 15-passenger van safety and its comprehensive plan to address the serious problem of rollover crashes will increase over time as the new requirements are phased in and as an increasing percentage of the on-road fleet meet these requirements.

As part of our rulemaking to upgrade FMVSS No. 216, we considered the comments and recommendation of the NTSB. In the final rule, we indicated that the rule would address the NTSB's recommendation H–03–16, to include 12- and 15-passenger vans in FMVSS No. 216, to minimize the extent to which survivable space is compromised in the event of a rollover accident. We plan to consult further with NTSB about its recommendation. We note that the petitioners have not provided any information that would lead us to change our view that the rule addresses that NTSB recommendation.

In its petition, CFiR also requested the agency to adopt a higher SWR for the heavier light vehicles with passenger seating positions of three or more. CfIR stated that these vehicles are often less stable, occupants are more vulnerable, and the vehicles are used more frequently in off-road transportation. As part of analyzing the target population of occupants who would be likely to benefit from a stronger roof due to an upgrade of FMVSS No. 216, the agency has already accounted for issues related to the stability of these vehicles and vulnerability of their occupants. Historically, vehicles with a GVWR between 2,723 and 4,536 kilograms (6,001 and 10,000 pounds) comprise approximately 20 percent of the fleet with over 90 percent of these heavy vehicles allowing for three or more seating positions.[14] As to the issue of more frequent off-road use, we note that the relevant agency sources would not collect data for crashes that happen during off-road transportation such as at work sites. However, CfIR has not provided any supporting information relating to its claim that the vehicles are used more frequently in off-road transportation, or that there are any significant number of rollover crashes that would meaningfully affect the target population used by the agency for its analysis of benefits and costs. We therefore do not accept this argument.

5. Agency's Cost-Benefit Analysis

Advocates *et al.* argued that NHTSA's cost-benefit analysis underestimates the number of lives that could be saved by much stronger roofs. They cited benefits estimates submitted by the Insurance Institute for Highway Safety (IIHS) in a March 2008 comment and in a subsequent publication. These petitioners stated that in that publication IIHS claimed that NHTSA underestimated roof strength improvement benefits due to the agency's mistaken belief that there will be no benefits for unbelted occupants or those occupants who risk ejection. They also said that IIHS provided much higher estimates of benefits than NHTSA.

Advocates *et al.* claimed that the agency failed to discuss or respond to the initial IIHS benefits estimate in the final rule. They claimed that while the agency engaged in "a highly detailed, extensive evaluation in the FRIA of the strengths and weaknesses of the study attached by IIHS to its docket comments," the agency failed in this supporting document to evaluate the benefits claims proffered by IIHS. The petitioners stated that the central point of the IIHS submission to the supplemental notice of proposed rulemaking (SNPRM) docket was to emphasize that the agency had dramatically underestimated the benefits of adopting a stronger fleet-wide FMVSS No. 216. Advocates *et al.* claimed that NHTSA ignored the merits of the IIHS benefits analysis "notwithstanding the internal debate set forth in the FRIA over some aspects of the methodology and data selected by IIHS in conducting its study."

NHTSA does not accept the claim of these petitioners that the agency ignored the merits of the IIHS benefits analysis. We begin by emphasizing that NHTSA's decision is based in significant part on the agency's Final Regulatory Impact Analysis. In section VII of the preamble to the final rule, titled Costs and Benefits, we explained that "(t)he agency addresses the comments concerning its analysis of costs and benefits in detail in the FRIA." 74 FR 22377. We also noted that, in the final rule preamble, we summarized the agency's estimates of costs and benefits and discussed the comments concerning target population and roof crush as a cause of injury.

In the FRIA, the agency provided a detailed 5-page discussion of the various IIHS studies, including both their methodology and conclusions (*see* pages 47–51). This discussion addressed the IIHS submissions from March 2008, May 2008, and February 2009, representing the most recent IIHS research submitted prior to publication of the final rule in May 2009. This same discussion also addressed comments by JP Research, which submitted its own evaluation of the IIHS study, and argued that there were significant flaws in its methodology.

NHTSA's discussion in the FRIA showed the limitations of the IIHS methodology and showed that its conclusions regarding ejections and belt use are not supported by the data. This discussion was not, as Advocates *et al.* suggest, an "internal debate" but an evaluation of the merits of the IIHS study and its findings. The FRIA also described the agency's own study, which applied previously peer-reviewed methods specifically to ejections and unbelted occupants, and which contradicted the IIHS studies. Given these considerations, the agency did not accept the benefit estimates provided by IIHS. The relevant issues concerning estimated benefits are addressed in much greater detail in Chapter IV of the FRIA.

Advocates *et al.* did not address any of the detailed criticisms of the IIHS analyses discussed by NHTSA in the FRIA, but simply claimed in its petition that the agency had ignored the merits of the IIHS study. Given the above discussion, we do not accept that claim.

Advocates also criticized the agency's adjustment of future target populations to reflect the required installation of electronic stability control (ESC) in all passenger vehicles. Advocates stated that the agency has only projected safety benefits as the fleet gradually is

[12] This update is available on NHTSA's Web site at: *http://www.nhtsa.dot.gov/cars/problems/studies/15PassVans/VAP_rev1_2008.pdf.*

[13] We note that there is some overlap between the actions in the agency's action plan for 15-passenger van safety and its comprehensive plan for addressing the serious problem of rollover crashes, discussed earlier in this document.

[14] According to the 2007 model year Polk Automotive vehicle registration data, standard cab pickup trucks with one row of seating and at least two designated seating positions account for approximately 10 percent of all vehicles registered with a GVWR between 2,723 and 4,536 kilograms (6,001 and 10,000 pounds). Extended cab pickup trucks, vans and sport utility vehicles that have the capacity to seat three or more occupants account for the remaining registrations in this vehicle weight class.

equipped with ESC, including large vans, but no actual crash data specifically verifying that rollovers have been reduced in large vans as a direct result of ESC.

The analysis presented by NHTSA in the FRIA reflects a projection of annual impacts that will occur when the entire vehicle fleet has been designed to include both ESC and stronger roofs, not the impacts to today's on-road fleet. In numerous studies as well as in vehicle tests, ESC has been shown to significantly reduce rollover crashes in passenger vehicles. During the course of the ESC rulemaking, when projecting the costs and benefits of ESC, NHTSA used effectiveness estimates based on sound, peer reviewed statistical studies to project the benefits of ESC in all passenger vehicles, including large vans. We note that in comments concerning the PRIA for ESC, Advocates acknowledged that the installation of ESC would impact the FMVSS No. 216 rulemaking by reducing the number of rollovers.

ESC will be standard equipment on all passenger vehicles before the new roof crush requirements become effective. This means that future vehicle fleets containing the stronger roofs required by FMVSS No. 216 will experience fewer rollover crashes than are experienced by the current on-road fleet. It would be inappropriate to compare the costs of improving roof strength to benefits derived from current fatality and injury levels without first adjusting for the significant impact that ESC will have on the crash experience of future vehicle fleets with enhanced roof strength.

Advocates *et al.* also claimed that ESC may not be effective in large vans. At the time NHTSA did its statistical analysis of this issue, there were too few vans on the road with ESC to analyze them separately from other vehicles. However, NHTSA has tested ESC on large vans and found that it is effective in improving stability in potential rollover scenarios. This study [15] found that "* * * installation of ESC on 15-passenger vans may have important safety benefits in some, but not necessarily all, on-road driving situations." This is reasonably consistent with ESC applicability in other vehicles where it is highly effective in many circumstances, but cannot prevent rollover in all situations.

Moreover, large vans make up a very small portion of the target population. NHTSA examined the sample cases included in its target population and did not find any cases involving large vans that met the criteria for inclusion. This does not imply that there would never be such cases, but it does indicate that they are a relatively rare occurrence.

One possible reason, aside from the relative rarity of these vehicles in the fleet, is that roof crush typically is only an issue in vehicles that roll more than one quarter turn. The general shape of large vans, with more extensive areas of sheet metal on each side, makes it less likely that they would roll more than one quarter turn. In NHTSA's Crashworthiness Data System (CDS) from 2004–2008, the portion of crash-involved passenger cars that rolled over was roughly equal to the portion of crash-involved vans that rolled over, but, passenger cars were twice as likely as vans to roll more than one quarter turn and thus expose their occupants to potential roof intrusion.

Given the above considerations, we decline to reconsider the target population related to ESC considerations.

B. Request That Agency Adopt a Dynamic Testing Provision

1. May 2009 Preamble Discussion

As discussed in the preamble to our May 2009 final rule, we developed our proposal to upgrade roof crush resistance requirements after considerable analysis and research, including conducting a research program to examine potential test procedures that might be adopted to improve the roof crush resistance requirements. The agency testing program included full vehicle dynamic rollover testing, inverted vehicle drop testing, and comparing inverted drop testing to a modified FMVSS No. 216 test. After considering the results of the testing and other available information, the agency concluded that the quasi-static procedure generates results that suitably represent the real-world dynamic loading damage patterns, and is the most appropriate one on which to focus our upgrade efforts.

We did not propose a dynamic test procedure in either the NPRM or the SNPRM. We did discuss in the NPRM a number of types of dynamic tests and why we were not including them in the proposal. With respect to the JRS test, we noted that although the agency was open to further investigating that test, we had no data regarding the repeatability of dummy injury and roof intrusion measurements, and would also need further information on its performance measures, practicability, and relevance to real-world injuries. We stated that, in summary, we were not proposing a dynamic test procedure and that we believed the current quasi-static test procedure is repeatable and capable of simulating real-world deformation patterns. We also stated that we were unaware of any dynamic test procedures that provide a sufficiently repeatable test environment.

Consumer advocacy organizations and a number of other commenters argued that it is not enough to upgrade the current quasi-static requirement, and that a dynamic test requirement is needed. While specific recommendations varied, one was for the agency to adopt an upgraded quasi-static requirement now, and to proceed with further rulemaking at this time for a dynamic test.

After reviewing the comments, we declined to pursue a dynamic test as part of that rulemaking, or to initiate a separate rulemaking for a dynamic test. We included an analysis of the comments recommending a dynamic test in an appendix.

We stated in the preamble that we were still not aware of any dynamic test procedure that provides a sufficiently repeatable test environment. We stated further that while some commenters argued that certain procedures are repeatable, the agency was not persuaded by the arguments and data they presented. We also noted that, for reasons discussed in the appendix, there are significant issues associated with each of the cited dynamic test procedures related to possible use in a Federal motor vehicle safety standard.

We explained further that, also of importance for this rulemaking, even if NHTSA were to identify a particular dynamic test procedure, among the many known to be available, as likely to be suitable for assessing roof crush resistance (something we have not been able to do thus far), we would need additional years of research to evaluate and refine, as necessary, the procedure in order to develop a proposal, including evaluating it in the context of the current vehicle fleet. We stated that it has not yet been determined whether any dynamic test requirement that might be identified by NHTSA's research would produce significant additional benefits beyond those that will be produced by the substantial upgrade of the quasi-static procedure that we adopted in that rule.

NHTSA stated that it agreed, however, with pursuing a dynamic test as our ultimate goal. We stated that we would like to have one for rollover crashes just as we do for front and side crashes. We

[15] Forkenbrock, G.J., and Garrott, W.R., "Testing the Rollover Resistance of Two 15-Passenger Vans with Multiple Load Configurations," National Highway Traffic Safety Administration, Washington, DC, June 2004, DOT HS 809 704.

stated that we could not adopt or even propose one now because of issues related to test repeatability, a dummy, and lack of injury criteria. We explained that we are pursuing further research for a dynamic test. In the meantime, we did not want to delay a significant upgrade of FMVSS No. 216 that will save 135 lives each year.

2. Overall Rationale for Request

As discussed above, CfIR asked us to reconsider our decision not to adopt a dynamic test. It cited two basic reasons for the agency to reconsider this issue.

First, CfIR argued that the quasi-static test and criteria do not reasonably differentiate between the injury risk of compliant and non-compliant vehicles. Second, the petitioner argued that, contrary to NHTSA's assertions, the Jordan Rollover System (JRS) dynamic test has been available for two years and extensive data submissions show it to be reliable, repeatable, validated to real world rollover injury risk and accurate in assessing comparative injury potential performance.

In its petition, CfIR cited numerous submissions it had made to the docket. This petitioner requested that the agency review the data previously submitted and summarized in its petition and consider the following actions related to a dynamic test: Adjust the rule to allow for an alternate dynamic compliance test, propose and allow for an alternative dynamic test for NCAP ratings, allow for non-compliance or compliance exceptions based on submitted dynamic test evidence, and correct statements made by the agency regarding the JRS' repeatability and reliability in testing a vehicle's dynamic performance that the petitioner considers to be misleading and inaccurate.

3. Introduction to Response

In responding to CfIR, we begin by noting that we do not consider a request to add a dynamic test requirement, including as an alternative test, to be a petition for reconsideration of the final rule. As we did not propose regulatory text to add a dynamic test procedure in either the NPRM or the SNPRM and did not invite comment on the possibility of including such a procedure in the final rule, adding a dynamic test procedure was not within the scope of this rulemaking. Our discussion in the preamble of the NPRM explaining why we were not including a dynamic test in the proposal did not put such a test within the scope of notice. We will nonetheless discuss the issues raised by CfIR as part of explaining our position in these areas.

We also note that CfIR requested that we propose and allow for an alternative dynamic test for NCAP ratings. In the preamble to the final rule, we addressed comments concerning NCAP by explaining that the purpose of this rulemaking is to upgrade our roof strength standard. We said that the issue of whether roof strength might be addressed in some way in our NCAP program would be considered separately in the context of that program. Moreover, the possibility of addressing roof strength in our NCAP program is not a rulemaking issue. Therefore, we are not addressing issues concerning NCAP in this document.

In addition, we note that CfIR has asked the agency to make a variety of conclusions relating to the use of the JRS in research and concerning how it compares to certain respects to various dynamic tests included in the agency's standards. *See* p. 4 of CfIR's supplement to its petition for reconsideration.

We are not providing such conclusions. NHTSA provided an analysis of comments concerning dynamic testing, including a discussion of several specific tests, for the limited purpose of explaining its decision whether to pursue a dynamic test as part of the current rulemaking (which would have meant issuing either a new NPRM or an SNPRM) or to initiate at this time a separate rulemaking for a dynamic test. We were not providing a comprehensive analysis of any of these various tests, and we do not take any position concerning the use of these tests in research.

4. Petitioner's Claim That Quasi-Static Test and Criteria Do Not Reasonably Differentiate Between the Injury Risk of Compliant and Non-Compliant Vehicles

CfIR claimed that the quasi-static test and criteria do not reasonably differentiate between the injury risk of compliant and non-compliant vehicles. It argued that some compliant vehicles have substantially greater injury risk than some non-compliant vehicles and vice-versa, as shown by IIHS real world rollover statistics and JRS dynamic test data.

The petitioner stated further that the agency's final rule, as compared to the earlier version of FMVSS No. 216, has as its basis a slightly modified test and significantly increased criteria for compliance with only a statistically inferred cumulative damage effect on injury potential. CfIR stated that its concern is that impact injuries are dynamic non-cumulative events and are a composite function of a vehicle's roll and pitch orientation, structural strength, geometry, elasticity and stiffness as well as occupant kinematics, interaction and effectiveness of protection features. It stated that only dynamic testing can accurately consider these variables and rate vehicles accordingly.

We do not accept CfIR's argument that the quasi-static test does not reasonably differentiate between the injury risk of compliant and non-compliant vehicles. NHTSA addressed the relationship between the FMVSS No. 216 quasi-static test procedure, alternative SWR levels, and injury risk throughout the rulemaking to upgrade the standard. We note that two studies [16] the agency conducted in support of the final rule have shown significant correlations between vertical roof intrusion and occupant injury from head contact. These studies significantly relate static test performance of a vehicle's roof to real world occupant safety.

In our SNPRM, when the second peer-reviewed study was released, the agency explained (73 FR 5490):

> More recently, the agency has estimated benefits based on the relationship between intrusion and the probability of injury. This relationship was not established when the NPRM was published, but with the additional years of data available, a statistically significant relationship between intrusion and injury for belted occupants has since been established. A study regarding this relationship has undergone peer review and is available in the docket. This broader relationship, together with other factors, including the higher failure rates resulting from adjustments for maximum vehicle weight and the higher effective SWRs that result from this same issue will likely lead to slightly higher benefits than was estimated in the NPRM.

The agency included in the FRIA a detailed discussion of how it analyzed benefits.

While CfIR has submitted numerous JRS test results and some analysis concerning those results and FMVSS No. 216 performance, it has not presented a comprehensive evaluation of real world occupant safety and JRS performance measures. We have concluded that further research would be needed to establish a correlation between performance on the JRS and real world occupant safety.

The agency recognizes that a dynamic test, if coupled with suitable injury criteria and dummy, has the potential to

[16] NHTSA Docket No. NHTSA–2008–0016: Strashny, Alexander, "The Role of Vertical Roof Intrusion and Post-Crash Headroom in Predicting Roof Contact Injuries to the Head, Neck, or Face during FMVSS 216 Rollovers," and NHTSA Docket No. NHTSA–2005–22143: Austin, Rory, *et al.,* "The Role of Post-Crash Headroom in Predicting Roof Contact Injuries to the Head, Neck, or Face During FMVSS No. 216 Rollovers."

assess some aspects of injury risk to occupants in rollover crashes that are not addressed by the current quasi-static test. Some of these risks are addressed by other parts of our comprehensive plan for reducing the serious risk of rollover crashes and the risk of death and serious injury in those crashes, including our rulemaking for ejection mitigation. Moreover, as discussed in the final rule preamble, we are pursuing further research for a dynamic test. However, the potential benefits that might result from a future rulemaking for a dynamic test requirement do not provide an appropriate reason to delay the significant upgrade of FMVSS No. 216 set forth in the May 2009 final rule that is estimated to save 135 lives each year.

As discussed above, CfIR requested that we adjust the rule to allow for an alternate dynamic compliance test or allow for non-compliance or compliance exceptions based on submitted dynamic test evidence.

We decline to permit such an alternative. Although we are pursuing further research on dynamic tests, we have not identified the JRS test as being suitable for inclusion in FMVSS No. 216.

5. Petitioner's Claim That JRS Test Device Has Been Available for Two Years and Extensive Test Data Submissions Show It To Be Reliable, Repeatable, Validated to Real World Injury Risk and Accurate in Assessing Comparative Injury Potential Performance

In its petition, CfIR claimed that, contrary to NHTSA assertions, the JRS dynamic test device has been available for two years and extensive test data submissions show it to be reliable, repeatable, validated to real world rollover injury risk and accurate in assessing comparative injury potential performance.

NHTSA considered all comments submitted in response to a Request for Comments (RFC) notice published in 2001, the NPRM, and the SNPRM prior to developing the final rule. However, we continue to believe that there are significant issues that require further research, including ones related to correlation of JRS performance measures with real world occupant safety and repeatability, as to whether the JRS device would be suitable to use for purposes of a test requirement in a Federal motor vehicle safety standard.

In discussing the issue of a dynamic rollover test, we believe it is important to distinguish between the various types of dynamic tests that might be developed and their purposes. As we discussed in the final rule preamble, rollover crashes are complex and chaotic events. Rollovers can range from a single quarter turn to eight or more quarter turns, with the duration of the rollover crash lasting from one to several seconds. The wide range of rollover conditions occurs because these crashes largely occur off road where the vehicle motion is highly influenced by roadside conditions.

The variety and complexity of real-world rollover crashes create significant challenges in developing dynamic tests suitable for a Federal motor vehicle safety standard. Rollover crash tests presented to and/or conducted by the agency have indicated a great degree of variability in vehicle and occupant kinematics.

In assessing whether a potential dynamic test would be appropriate for a Federal motor vehicle safety standard, the agency must consider such issues as (1) Whether the test is representative of real-world crashes with respect to what happens to the vehicle and any specified test dummies; (2) for the specific aspect of performance at issue, whether the test is sufficiently representative of enough relevant real-world crashes to drive appropriate countermeasures and, if not, the number and nature of necessary tests to achieve that purpose; (3) whether the test is repeatable and reproducible so that the standard will be objective and practicable; and (4) whether the test dummies to be specified are biofidelic for the purposes used.

In considering the possibility of a dynamic rollover test in the context of this particular FMVSS No. 216 rulemaking, we primarily focused on whether a particular test would appropriately assess roof crush resistance. As we explained in the NPRM and in subsequent documents, the record showed that the quasi-static procedure provides a suitable representation of the real-world dynamic loading damage patterns, and an appropriate procedure to use in upgrading the standard.

It is possible that an alternative dynamic test could be used to assess roof crush resistance in a manner similar to that of the current quasi-static test. For example, measurements of headroom might be taken before and after a dynamic crash test, and it also might be possible to measure available headroom during a crash test. CfIR cited what it referred to as post crash negative headroom.[17]

The potential benefits of a dynamic rollover test could be much larger if the test provided direct measurements of injury risks in a crash test that is representative of real-world crashes and there were a dummy suitable for that purpose. The agency's dynamic front and side impact test requirements were developed based upon crash types and injury outcomes in the field using anthropomorphic test dummies that were developed for specific crash tests.

In addressing the issue of repeatability in its petition, CfIR cites data which it argues show that the procedure tests vehicles in a repeatable and reliable way, with acceptable variances, to the inputs supplied by the person conducting the test. It cites variances for road speed, contact pitch angle and contact roll angle. The data it presented suggest that it is able to control these test parameters with minimal variation.

However, while it is necessary for these kinds of control parameters to be repeatable, that is only one aspect of evaluating repeatability and reproducibility. Repeatability must be evaluated using outcome or performance measures. This would include whatever performance criteria were to be included in a standard.

Moreover, if the agency were to identify the JRS test (among the many potential alternative dynamic tests) as likely to be suitable to include in FMVSS No. 216, we would need additional research to evaluate and refine, as necessary, the procedure to develop a proposal, including evaluating it in the context of the current vehicle fleet. The agency would need, for example, to evaluate the appropriate levels for the various inputs, appropriate performance criteria, repeatability, and so forth.

As noted earlier, rollover crash tests can have an undesirable amount of variability in vehicle and occupant kinematics. Moreover, there are many types of rollover crashes, and within each crash type the vehicle speed and other parameters can vary widely. A curb trip can be a very fast event with a relatively high lateral acceleration. Soil and gravel trips have lower lateral accelerations than a curb trip and lower initial roll rates. Fall-over rollovers are the longest duration events. Viano and Parenteau[18] correlated eight different tests to six rollover definitions from NASS–CDS. Their analysis indicated that the types of rollovers occurring in the real-world varied significantly.

[17] CfIR defined post crash negative headroom as being the equivalent of post crash cumulative roof crush.

[18] Viano D, Parenteau C., "Rollover Crash Sensing and Safety Overview," SAE 2004–01–0342.

Occupant kinematics will also vary with these crash types.

Numerous issues would need to be addressed to assess the suitability of using the JRS (or any other dynamic test), in a Federal motor vehicle safety standard as a more comprehensive test providing direct measurements of various injury risks. As previously discussed, these would include, but not be limited to, the following: (1) For which of the various kinds of real-world rollover crashes the test would be representative and in what ways with respect to what happens to the vehicle and any specified test dummies during the test, (2) for each specific aspect of performance at issue, whether the test is sufficiently representative of enough relevant real-world crashes, and also whether there are appropriate performance criteria, to drive appropriate countermeasures, (3) whether the test is repeatable and reproducible with respect to both input and output measures (included any performance criteria) so that the standard will be objective and practicable, (4) whether the test dummies to be specified are biofidelic for the purposes used, (5) the extent to which the test addresses real-world injuries not already addressed by other Federal motor vehicle safety standards so that the test requirement would likely result in significant safety benefits, and (6) how the test compares to other possible dynamic tests, as well as possible non-dynamic tests, for the purpose of achieving these safety benefits.

Our analysis of potential dynamic tests is complicated by the following factors:

• The currently available anthropomorphic test devices (*i.e.,* dummies) were not designed for use in rollover testing and have not been shown to be valid for such use.[19] Frontal impact test dummies and side impact test dummies are not interchangeable and neither is suitable for use in a rollover test. The Hybrid III dummies, for example, were designed for high acceleration impacts and their motion does not resemble human response under multi axis low acceleration loading found in rollover crashes. While CfIR claims to have developed a more appropriate neck, this device has not been documented, had its biomechanical response demonstrated and correlated to human response corridors, or independently evaluated.

• There are no generally accepted performance measures to evaluate dynamic vehicle performance in rollover crashes. CfIR claimed that "NHTSA, IIHS, and consensus biomechanical performance criteria have been established and generally accepted," but have not substantiated that claim or otherwise demonstrated the validity of the performance measures they recommend for measuring injury risk in this context. CfIR has attempted to compare measurements between vehicles and evaluate their performance measures based on their consistency with anecdotal observations regarding rollover safety.[20] However, CfIR has not shown that this is a generally accepted approach for measuring real-world injury risk or otherwise demonstrated its validity.

Given these issues, as well as others discussed in the final rule preamble and appendix, we believe that there are significant issues as to whether the JRS would be suitable to use for purposes of a test requirement to include in a Federal motor vehicle safety standard.

As discussed in the final rule preamble, we would like to have a dynamic performance test for rollover crashes just as we do for front and side crashes. To that end, we are pursuing further research into the feasibility of a comprehensive dynamic test.

We are sponsoring research that will include the following: (1) Assess vehicle, crash, occupant and injury patterns in rollover crashes through epidemiologic investigations; (2) develop priorities and parameter ranges for dynamic rollover research that are derived from analytical, epidemiological, and computational investigations; (3) develop a dynamic test fixture and associated test procedure capable of simulating the dynamic rollover loading environment; (4) perform a baseline evaluation of the sensitivity of the vehicle and occupant response to static and dynamic vehicle parameters; (5) evaluate the biofidelity of currently available anthropometric test devices in terms of their ability to predict injury risk in rollover environments; and (6) evaluate the predictive capabilities of current injury criteria for the most common rollover injuries.

Also, for several years, NHTSA has evaluated the performance of occupant restraint systems in a simulated rollover environment. This test series has evaluated the performance of a variety of restraint systems in limiting occupant motion during a simulated roof to ground impact. NHTSA has recently initiated a research program to conduct full scale rollover tests to evaluate whether the relative performance of advanced restraints shown in laboratory testing can be replicated in a full scale rollover test. NHTSA is conducting a series of full vehicle rollover tests with similarly restrained front and rear seat occupants on the same side of a large SUV. The agency desires to establish a comparable inertial environment between two occupants on the same side of the vehicle to compare restraint performance.

While we hope in the future to be able to consider rulemaking to establish a dynamic rollover test, we believe that significant additional research is needed before that would be possible. We will be conducting and sponsoring our own research and will monitor the research of others, including the petitioner's. However, for the reasons discussed in this document and in the other documents we issued in the context of the rulemaking to upgrade FMVSS No. 216, we are not prepared to initiate rulemaking for a dynamic rollover test at this time.

We note that our views concerning a dynamic test appear to be similar to those of IIHS. In its March 24, 2009 Status Report,[21] IIHS stated, under the heading "A Dynamic Test Would Be Ideal, But Which One?":

> A dynamic test could fill in the missing data. However, the best way to conduct such a test and how to evaluate the results are still under debate.
>
> Real rollover crashes occur in lots of ways, and engineers have come up with different kinds of tests to address various aspects of these crashes — dolly rollovers, curb trips, dirt trips, corkscrews, and fallovers, among others. No single test best represents the broad spectrum of actual crashes.
>
> Measuring how a roof crushes in a dynamic test is trickier than in a static test, and some testing methods would preclude having dummies inside the vehicles. The dummy itself is a problem because none of the existing types was designed to assess injury risk in a rollover crash. Some dummies may not even move like people do when turned upside down.
>
> A further complication is that many rollovers are preceded by other events that may affect occupants' positions when their

[19] *See* Lai, W. III, B. E., Richards, D., Carhart, M. Newberry, W., and Corrigan, C.F., "Evaluation of human surrogate models for rollover," SAE 2005–01–0941; Yamaguchi, G.T., Carhart, M. R., Larson R., Richards, D., Pierce, J., Raasch, C.C., Scher, I., and Corrigan, C.F., "Electromyographic activity and posturing of the human neck during rollover tests," SAE–2005–01–0302.

[20] *See,* for example, Transcript of proceedings during the question and answers session, J. G. Paver, D. Friedman, F. Carlin, J. Bish, and J. Caplinger, "Development of Rollover Injury Assessment Instrumentation and Criteria," Injury Biomechanics Research, Proceedings of the Thirty-Sixth International Workshop, 2008.

[21] *http://www.iihs.org/externaldata/srdata/docs/sr4403.pdf.*

vehicles roll. This means researchers will have to figure out the best position for a dummy in a dynamic test.

In the end, specifying a dynamic test is a big task that's only just started. In the meantime, Institute research shows that making roofs stronger as measured in a relatively simple test will prevent many injuries and deaths in rollover crashes.

C. Other Issues

In this section, we address several additional issues raised by CfIR.

Benefits Estimates

In its petition, CfIR presented benefits estimates based on JRS test results and also based on IIHS estimates of benefits. The petitioner claimed, with respect to affected population and benefits, that "(c)ontrary to submitted JRS evidence of the benefits of reduced roof crush in preserving side windows and avoiding ejection portals, the agency predicts only 667 lives saved." We note that the 667 figure is the target population of occupants who might benefit from improved roof strength rather than the number of lives saved. CfIR claimed that the agency justified its prediction "by characterizing the effect of their own statistical injury potential data and ignoring the comparable IIHS ejection, and a general 50% reduction of incapacitating injury benefit to restrained, unrestrained and ejected occupants."

The issue raised by CfIR about the IIHS estimates of benefits is essentially the same as the one raised by Advocates *et al.* As discussed earlier in this document, our decision not to accept the IIHS estimates of benefits was based on a detailed analysis of the IIHS studies and methodology presented in the FRIA. CfIR *et al.* did not address any of the detailed criticisms of the IIHS analyses discussed by NHTSA in the FRIA, but simply claimed in its petition that the agency had ignored the IIHS estimates. Given the above discussion, including that presented in the context of the claim made by Advocates *et al.* we do not accept CfIR's claim. We also do not accept estimates of benefits presented by CfIR that rely on the IIHS estimates of benefits that we did not accept.

CfIR Supplement to Petition

As noted earlier, in September 2009, CfIR submitted a document it called a "supplement" to its petition for reconsideration. It attached a document discussing JRS test results which it said indicate that an SWR of 4.1 is required to minimize roof crush injury potential. CfIR stated it requested reconsideration of JRS dynamic testing for the final rule for two reasons: (1) IIHS's SWR of 4 or greater has gained industry acceptance and timely voluntary compliance, and (2) the JRS test fixture accurately measures post crash negative headroom and can assess the injury potential of occupant protection systems. It stated that its supplement requests further (1) raising the static test criteria to the dynamically derived SWR criteria of 4, and (2) initiating a dynamic rollover crashworthiness NCAP program using the JRS fixture.

We note that we may, in responding to a petition for reconsideration, consider supplementary information provided in support of a request included in that petition. We observe that raising the static SWR criterion to 4 is a new request that is not within the scope of CfIR's petition.

Moreover, the fact that IIHS has selected a SWR of 4, in a one-sided test, in order for a vehicle to be rated as "good" does not provide a reason for us to conduct rulemaking for a higher SWR. We explained the basis for our decisions concerning SWR in the May 2009 final rule preamble, and CfIR has not provided any reasons for us to conduct further rulemaking on that issue.

Paper Titled "Scientific Review and Evaluation of the Jordan Rollover System (JRS) Impact Crash Test Device"

CfIR submitted a paper titled "Scientific Review and Evaluation of the Jordan Rollover System (JRS) Impact Crash Test Device." [22] While we reviewed that paper, we believe that it does not provide sufficient new information to lead us to change our position that there are significant issues as to whether the JRS would be suitable to use for purposes of a test requirement to include in a Federal motor vehicle safety standard.

Alleged Errors

In an appendix to its petition for reconsideration, CfIR identified what it characterized as "notable errors" regarding the JRS in the body of the May 2009 final rule preamble and in Appendix A of that document. We have discussed earlier in this document a number of the issues raised by CfIR in this appendix, and are providing additional discussion about several issues raised by CfIR in that appendix below. Beyond the issues discussed earlier in this document and the additional discussion below, we believe that much of the information CfIR provides in its appendix simply represent comment about our statements. We believe there is no need to discuss each of these detailed comments, as they do not provide information that would lead us to change our position that there are significant issues as to whether the JRS would be suitable to use for purposes of a test requirement to include in a Federal motor vehicle safety standard.

Discussion on roof racks. CfIR claimed that NHTSA observed that the roof racks the agency looked at had no appreciable effect on SWR, but ignored its submissions on the substantial Nissan Xterra (and Land Rover Discovery) tubular racks and the panel-mounted Jeep Grand Cherokee racks which it asserted focused loading and created deep intruding buckles. As discussed in the final rule preamble, the existing FMVSS No. 216 test procedure specified removal of roof racks prior to platen positioning or load application. We did not propose to change that specification and, after considering a comment submitted by Xprts, did not change it in the final rule. *See* 49 FR 22371.

We reviewed the JRS test submissions, and it continues to be our view that there has not been any demonstration that roof racks contribute substantially to roof crush so as to warrant changing the current specification. We note that we reviewed the materials provided by CfIR and, based on what was presented, could not draw a conclusion whether the roof rack degraded the performance of the roof in the test. Moreover, given the issues discussed earlier in this document, it is not clear what significance JRS test results such as these would have in showing how significant a potential problem might be in the real world.

As we discussed in the final preamble, the agency reviewed NASS–CDS and could not find any relationship that roof racks cause catastrophic deformation of the roof in a rollover. The agency stated:

* * * We reviewed several NASS–CDS cases [23] of utility vehicles with roof racks that had undergone rollover crashes. Our review did not support the contention that the presence of a roof rack initiated buckling of the roof and increased the risk of occupant injury. There was also no general trend concerning injury severity and presence of a roof rack in the reviewed cases.

[22] See NHTSA–2009–0093: Scientific Review & Evaluation of the Jordan Rollover System (JRS) Impact Crash Test Device.

[23] Photographs collected from NASS–CDS Case Query Page. NASS–CDS cases examined: 100121, 102005185, 146004985, 161005827, 656500082, 471300143, and 129005218.

We further reviewed our fatal hardcopy case files [24] and could not identify a single case where the roof rack appeared to aggravate the deformation of the roof structure. 74 FR 22372.

Discussion about repeatability of test dummy and initial restraint positioning. We included a discussion in Appendix A of the final rule stating that because the JRS is spinning prior to initiating the vehicle test, there are concerns about how to establish the initial belt position on the test dummy in a manner that is consistent with real world conditions. We stated that the lateral acceleration prior to rollover initiation can cause a belted occupant to introduce slack in the belt. We stated that there is also the additional complication of the timing for firing the rollover curtains and/or pretensioners in the JRS pre-spin cycle.

CfIR stated that this is a reference to the CRIS test and is not appropriate to the JRS. However, we believe the language cited by CfIR as incorrect is ambiguous as the vehicle spins in the JRS just prior to impact with the roadway surface, where the CRIS has the vehicle spinning at full velocity prior to impact with the ground. Therefore, both the JRS and CRIS have the vehicle in a pre-spin prior to impact with the road surface.

D. Conclusion

For the reasons discussed above, we deny the petitions for reconsideration submitted by Advocates *et al.* and CfIR.

Authority: 49 U.S.C. 322, 30111, 30115, 30166 and 30177; delegation of authority at 49 CFR 1.50.

Issued: April 2, 2010.

Stephen R. Kratzke,

Associate Administrator for Rulemaking.

[FR Doc. 2010–7908 Filed 4–6–10; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 648

[Docket No. 0909101271–91272–01]

RIN 0648–AY23

Fisheries of the Northeastern United States; Black Sea Bass Recreational Fishery; Emergency Rule Correction and Extension

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary rules; correcting amendment and emergency action extension.

SUMMARY: NMFS is taking two actions through this rule: Correcting regulations in the October 5, 2009, emergency rule that closed the recreational black sea bass fishery in the Federal waters of the Exclusive Economic Zone (EEZ) from 3 to 200 nautical miles offshore, north of Cape Hatteras, NC; and extending of that initial closure. This action is necessary to both correct the implementing regulations of the initial closure that were inadvertently implemented with no end date, and to extend the prohibition on recreational fishing for black sea bass in the EEZ beyond the expiration of the initial closure period. The intent of the correction is to correct the regulatory language of the initial closure, thereby establishing an end date for the initial closure period, consistent with the intent of the initial rule. The intent of the emergency closure extension is to ensure that recreational mortality does not occur between the end date of the closure as specified in the correcting action of this rule, and the start of the 2010 black sea bass recreational fishery season recommendations of both the Mid-Atlantic Fishery Management Council (Council) and Atlantic States Marine Fisheries Commission (Commission).

DATES: Amendments to §§ 648.142 and 648.145 in amendatory instructions 2 through 4 are effective April 7, 2010, and the amendment to § 648.142 in amendatory instruction 5 is effective April 8, 2010 through 11:59 p.m., May 21, 2010.

FOR FURTHER INFORMATION CONTACT: Michael Ruccio, Fishery Policy Analyst, (978) 281–9104.

SUPPLEMENTARY INFORMATION:

Correction Rule

NMFS published an emergency rule to close Federal waters of the EEZ from 3 to 200 nautical miles offshore, north of Cape Hatteras, NC, to black sea bass recreational fishing in the **Federal Register** effective October 5, 2009 (74 FR 51092), for a period of 180 days. This closure was necessary as the information available indicated that the 2009 Recreational Harvest Limit (RHL), the annual catch level established for the recreational fishery, had been exceeded by a considerable amount. Subsequent to the closure implementation, information from the NMFS Marine Recreational Fisheries Statistics Survey (MRFSS) through August 2009 indicated black sea bass landings were 1,944,303 lb (882 mt). This exceeded the 2009 RHL of 1,137,810 lb (516 mt) by 71 percent.

An error occurred in promulgating the October 5, 2009, emergency closure rule. The rule was published in the **Federal Register** without specification of when the 180–day effective period would end. The rule became effective on October 5, 2009, and will remain in effect until modified by subsequent rulemaking. While NMFS clearly intended that the closure remain in effect for 180 days, consistent with the authority provided in section 305(c) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the lack of a published end date has been confusing to stakeholders, implements a regulation that would exceed the underlying authority used to implement the closure, and requires correction. Thus, this action is correcting the October 5, 2009 (74 FR 51092), rule so that the 180–day period end date of April 12, 2010, is provided, as originally intended by NMFS and consistent with the emergency authority in the Magnuson-Stevens Act.

Temporary Emergency Rule Extension

At the time of the initial emergency closure, NMFS, the Council, and Commission were in the process of finalizing 2010 black sea bass specifications (i.e., RHL and commercial fishery quota) and would be undertaking the initial phases of 2010 black sea bass recreational management measures shortly thereafter. It was not known exactly what the 2010 specifications would be when the closure was implemented, but the preliminary information available suggested that recreational landings in 2010 would have to be reduced from 2009 levels to ensure the 2010 RHL would not be exceeded. Thus, NMFS implemented a 180–day closure rather than implementing a closure effective only until the end of the 2009 fishing year. The expectation at the time of the closure was that the Council and Commission's joint management process for recommending recreational measures would occur through November and December 2009, with a final recommendation for managing the 2010 recreational black sea bass provided to NMFS early in 2010 for review, analysis, and rulemaking. Several unforeseen events have transpired in the interim since the initial closure was implemented on October 5, 2009. These events have made the 2010 black sea bass recreational management measures

[24] *See* Docket Number NHTSA 2005–22143–56: Roof Crush Analysis Using 1997–2001 NASS Case Review.