

under Executive Order 12866 (58 FR 51735, October 4, 1993).

2. Paperwork Reduction Act

This rule does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.).

3. Regulatory Flexibility Act

After considering the economic impacts of today's rule on small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.), I certify that this rule will not have a significant economic impact on a substantial number of small entities.

4. Unfunded Mandates Reform Act

Because this rule approves pre-existing requirements under state law and does not impose any additional enforceable duty beyond that required by state law, it does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4).

5. Executive Order 13132: Federalism

Executive Order 13132 (64 FR 43255, August 10, 1999) does not apply to this rule because it will not have federalism implications (i.e., substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government).

6. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175 (65 FR 67249, November 9, 2000) does not apply to this rule because it will not have tribal implications (i.e., substantial direct effects on one or more Indian tribes, on the relationship between the federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes.)

7. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

This rule is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997), because it is not economically significant as defined in Executive Order 12866 and because the EPA does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

8. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This rule is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not a significant regulatory action as defined in Executive Order 12866.

9. National Technology Transfer Advancement Act

EPA approves State programs as long as they meet criteria required by RCRA, so it would be inconsistent with applicable law for EPA, in its review of a State program, to require the use of any particular voluntary consensus standard in place of another standard that meets requirements of RCRA. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply to this rule.

10. Executive Order 12988

As required by section 3 of Executive Order 12988 (61 FR 4729, February 7, 1996), in issuing this rule, EPA has taken the necessary steps to eliminate drafting errors and ambiguity, minimize potential litigation, and provide a clear legal standard for affected conduct.

11. Executive Order 12630: Evaluation of Risk and Avoidance of Unanticipated Takings

EPA has complied with Executive Order 12630 (53 FR 8859, March 18, 1988) by examining the takings implications of the rule in accordance with the Attorney General's Supplemental Guidelines for the Evaluation of Risk and Avoidance of Unanticipated Takings issued under the executive order.

12. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations

Because this rule proposes authorization of pre-existing state rules and imposes no additional requirements beyond those imposed by state law and there are no anticipated significant adverse human health or environmental effects, the rule is not subject to Executive Order 12898 (59 FR 7629, February 16, 1994).

List of Subjects in 40 CFR Part 271

Environmental protection, Administrative practice and procedure, Confidential business information, Hazardous materials transportation, Hazardous waste, Indian-lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements.

Authority: This action is issued under the authority of sections 2002(a), 3006 and 7004(b) of the Solid Waste Disposal Act as amended, 42 U.S.C. 6912(a), 6926, 6974(b).

Dated: September 26, 2007.

Bharat Mathur,

Acting Regional Administrator, Region 5.

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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA-2007-28517]

RIN 2127-AK05

Federal Motor Vehicle Safety Standards; Electric-Powered Vehicles: Electrolyte Spillage and Electrical Shock Protection

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

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: Based on concern that the agency's standard on electric-powered vehicles, as currently written, may inadvertently hinder the development of fuel cell vehicles in the United States, NHTSA is proposing to amend the electrical safety requirements of Federal Motor Vehicle Safety Standard (FMVSS) No. 305, *Electric-powered vehicles: electrolyte spillage and electrical shock protection*. The amendment would ensure that state-of-the-art fuel cell vehicles (FCVs) are consistent with the interests of safety and encompassed by FMVSS No. 305 so that the market may continue to develop. This NPRM also proposes to harmonize FMVSS No. 305 with the revised FMVSS No. 301, as regards rear moving barrier impact test conditions. This rulemaking commenced in response to a petition from the Alliance of Automobile Manufacturers.

DATES: You should submit your comments early enough to ensure that Docket Management receives them not later than December 10, 2007. Proposed effective date of final rule: assuming that a final rule is issued, NHTSA proposes that the changes adopted by the rule would be mandatory for fuel cell vehicles manufactured on or after exactly one year from the date of publication of the final rule in the **Federal Register**, with optional early compliance.

ADDRESSES: You may submit comments [identified by DOT Docket ID Number NHTSA-2007-28517] by any of the following methods:

- **Federal eRulemaking Portal:** Go to <http://www.regulations.gov>. Follow the online instructions for submitting comments.

- **Mail:** Docket Management Facility: U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

- **Hand Delivery or Courier:** West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal holidays.

- **Fax:** 202-493-2251.

Instructions: For detailed instructions on submitting comments and additional information on the rulemaking process, see the Public Participation heading of the Supplementary Information section of this document. Note that all comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided. Please see the Privacy Act heading below.

Privacy Act: Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477-78) or you may visit <http://DocketInfo.dot.gov>.

Docket: For access to the docket to read background documents or comments received, go to <http://www.regulations.gov> or the street address listed above. Follow the online instructions for accessing the dockets.

FOR FURTHER INFORMATION CONTACT: For technical issues, you may call Mr. Charles Hott, Office of Rulemaking (Telephone: 202-366-0247) (Fax: 202-493-2990). For legal issues, you may call Ms. Rebecca Schade, Office of Chief Counsel (Telephone: 202-366-2992) (Fax: 202-366-3820). You may send mail to these officials at National Highway Traffic Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building, Washington, DC 20590.

SUPPLEMENTARY INFORMATION:

Table of Contents

I. Background

II. Petitioner's Suggested Changes; NHTSA's Decisions on the Petition

A. Fuel cell vehicles and FMVSS No. 305's isolation requirement

- B. Test Procedure Measurement Values
- C. Test Procedure Measurement Location on the Vehicle
- D. Setting 0.2 Joules as an Appropriate Low Energy Threshold
- E. Harmonizing FMVSS No. 305's Rear Impact Test Procedure with FMVSS No. 301

III. International Harmonization

IV. The Proposed Rule

V. Benefits/Costs

VI. Public Participation

VII. Rulemaking Analyses and Notices

I. Background

Vehicles that use electricity as propulsion power can contain high voltage systems operating with several hundred volts at a time, as compared to conventional petroleum-powered vehicles, which usually contain only a 12-volt battery to power accessories like headlights, radios, and so forth. Thus, electric vehicles potentially pose electrical risks not posed by conventional petroleum-powered vehicles. During a crash, NHTSA requires electric vehicles to limit electrolyte spillage, retain energy storage devices, and maintain isolation between the vehicle's chassis and high-voltage system (49 Code of Federal Regulations (CFR) Part 571.305, "Electric-powered vehicles: electrolyte spillage and electrical shock protection;" also referred to as Federal Motor Vehicle Safety Standard (FMVSS) No. 305). Maintaining electrical isolation ensures that the high voltage system does not use the chassis itself to complete (or close) the circuit. This makes it less likely that a human or other object could touch the chassis and become part of the circuit, allowing electrical current to flow through them. FMVSS No. 305 is intended to protect occupants, rescue workers, or others who may come in contact with the vehicle after a crash from electrical shock hazards, by ensuring isolation of the vehicle's high voltage battery electrical system.

FMVSS No. 305 was originally drafted based on a voluntary consensus standard, the Society of Automotive Engineers (SAE) Recommended Practice for Electric and Hybrid Electric Vehicle Battery Systems Crash Integrity Testing (SAE J1766). SAE J1766 was first issued in 1996 and most recently updated in April 2005 in order to accommodate fuel cell vehicles (FCVs), based on concerns that SAE J1766 and FMVSS No. 305's electrical isolation requirements had not considered FCVs when they were originally developed.¹

¹ FMVSS No. 305 currently contains a 500 ohms/volt electrical isolation requirement, with isolation measured between the high voltage propulsion battery and the chassis. FCVs are designed with

In order to bring FMVSS No. 305 back into line with the updates to SAE J1766, the Alliance of Automobile Manufacturers ("the Alliance") petitioned NHTSA to conduct rulemaking to amend the requirements of FMVSS No. 305 so that FCV manufacturers would know the performance requirements required to comply with the FMVSSs and so that FCV development could proceed without hindrance. NHTSA is issuing this NPRM in order to promote our national policy goal of developing the hydrogen FCV market consistent with the interests of safety. The agency anticipates that current state-of-the-art FCVs, whether they contain AC or DC high voltage systems, will be able to meet the requirements of this proposed rule with virtually no design changes necessary.

II. Petitioner's Suggested Changes; NHTSA's Decisions on the Petition

In this section, the preamble sets forth the petition's many suggested changes to FMVSS No. 305's requirements. These are marked in bullet format, and are followed by NHTSA's response to each suggested change. As will be discussed, NHTSA generally tentatively agrees with most of the petitioner's suggestions. To the extent the agency does not agree, the reasons for disagreeing are explained.

NHTSA generally concurs with the petitioner's suggested amendments to FMVSS No. 305's requirements (except as noted) because the agency tentatively concludes that the changes would achieve the policy objective of aiding the development of the hydrogen FCV market consistent with the interests of safety. NHTSA agrees with the petitioner that not undertaking rulemaking could potentially interfere with development of the FCV market, as FCV manufacturers are currently uncertain of how to test electrical isolation in FCVs with liquid coolant loops.² An additional benefit of this

coolant loops to cool down very hot fuel cells during operation, and the coolant tends to become more conductive of electrical current over time, and able to convey electrical current to the vehicle chassis; *i.e.*, the conductivity of the coolant causes the vehicle to be unable to maintain electrical isolation.

² Under the current FMVSS No. 305, electrical isolation is measured only between the high voltage propulsion battery and the chassis, and functionally often ends up not being measured, because there is typically no voltage to be found downstream of the contactors that disconnect high voltage from the battery in the event of a crash. The proposed FMVSS No. 305 would measure electrical isolation between all high voltage sources and the chassis, clarifying vehicle manufacturers' obligations in terms of ensuring electrical isolation.

rulemaking becoming final would be closer harmonization with international and voluntary industry consensus standards.

A. Fuel Cell Vehicles and FMVSS No. 305's Isolation Requirement

FMVSS No. 305 currently requires an electrical isolation of 500 ohms/volt.³ That isolation must be maintained between the vehicle's propulsion battery and chassis after frontal, side, and rear crash tests, and was based upon the shock hazard for alternating current (AC). The standard does not distinguish between AC and DC (direct current) types of electrical current. Also, the standard calculates isolation values using voltage readings only between the propulsion battery and the chassis, and not from other potential high voltage sources that may cause a shock hazard, such as fuel cells. Fuel cells and converters that change DC electrical current into AC to supply propulsion motors used in some electric-motor vehicle designs are not currently required to maintain electrical isolation from the chassis.

- The petitioner states that the current 500 ohms/volt isolation requirement of FMVSS No. 305's paragraph S5.3 is not achievable for state-of-the-art FCVs, because they require a liquid coolant to dissipate the heat generated in the fuel cell, and the coolant itself is unavoidably an electrical conductor.⁴ The petitioner argues that the updated SAE J1766 allowance for an isolation level of 100 ohms/volt under certain defined conditions does not lower the level of safety currently provided by FMVSS No. 305, because it is well within the range of safety for DC current, and because the provision " * * * is directly tied to a requirement to continuously monitor electrical isolation in service, with the obvious implication that driver warnings and other appropriate remedial actions will be taken if isolation drifts below the specified 100 ohms/volt level."

NHTSA's response: We are proposing to set the electrical isolation for DC at 125 ohms/volt, not 100 ohms/volt.⁵ As

noted above, FMVSS No. 305 currently requires 500 ohms/volt electrical isolation, which corresponds to 2 milliamps of body current for AC systems.⁶ To produce the same physiological effects (at least, before the onset of serious physical harm), the human body can withstand up to four times the amount of DC as AC. Thus, the DC current corresponding to the existing FMVSS No. 305 requirement for AC (2 milliamps) would be $2 \times 4 = 8$ milliamps DC current. 8 milliamps of current corresponds to 125 ohms/volt electrical isolation for DC, not 100 ohms/volt.⁷ This NPRM thus proposes to set the electrical isolation for DC at 125 ohms/volt.

B. Test Procedure Measurement Values

The electrical isolation test procedure of FMVSS No. 305, contained in S7.6, essentially consists of: (1) Identifying the propulsion battery terminal that has the highest voltage differential between it and the vehicle chassis; (2) inserting a resistor of known value between that terminal and the vehicle chassis; and (3) measuring the voltage difference between the vehicle chassis and the battery terminal. With those measurements, the post-crash isolation resistance is determined according to a formula provided in the standard.

- The petitioner requested that FMVSS No. 305 be amended to recognize voltages of less than 60 VDC or 30 VAC as an appropriate way to provide electrical safety protection, as the revised SAE J1766 already does. The Alliance pointed out that most electric vehicle designs use electrical contactors to disconnect high voltage from the propulsion battery in the event of a crash or other loss of isolation. Thus, they argued that the electrical isolation test procedure of FMVSS No. 305 is inappropriate for such designs, because the voltage differential between the high voltage system and the chassis would be zero, which would put a zero in the

to electrical current passing through it: thus, a higher electrical isolation means that less current passes through.

⁶ Based on Figure 1 in IEC-479, International Electrotechnical Commission, Technical Report: Effects of current on human beings and livestock—Part 1: General aspects (3rd ed., Sept. 1994). The agency received this as part of a presentation included in the Alliance's petition for rulemaking. Available for public viewing in the Office of Crashworthiness Standards, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., West Building, Washington, DC 20590.

⁷ Based on Figure 2, id. The agency received this as part of a presentation included in the Alliance's petition for rulemaking. According to the same chart, 100 ohms/volt corresponds to 5 times the amount of DC as AC, which is beyond the accepted range of physical safety.

denominator of the equation to calculate isolation. The Alliance noted that FMVSS No. 305 does not recognize the absence of voltage as evidence of electrical safety, and therefore petitioned that the standard be revised to recognize voltages of less than 60 VDC or 30 VAC as an appropriate way to provide electrical safety protection.

NHTSA's response: We agree that FMVSS No. 305 is not explicit that a voltage measurement of zero in the test procedure is evidence of electrical safety. We tentatively agree that it would be evidence of electrical safety, and are therefore proposing to change the test requirement in S5.3 from "electrical isolation" to "electrical safety," so that "electrical isolation" becomes only one of the alternative requirements for "electrical safety," along with a requirement that voltage between the vehicle chassis and the high voltage source be less than 60 VDC or 30 VAC. We believe that these changes would clarify the issue raised by the petitioner.

- The petitioner noted that NHTSA had previously expressed concern over the lack of a viable test procedure to test FCVs with hydrogen, but emphasized the importance of proceeding with this rulemaking in order not to hamper development of FCVs, and expressed its view that the test procedure was a detail that could be worked out later.

NHTSA's response: The problem of not having a viable test procedure is that, for the safety of the testers, crash tests are generally performed with vehicles left unfueled or fueled with a less volatile alternative substance. However, FMVSS No. 305 and its formulas for calculating electrical isolation require that an electrical output measurement be available during the pretest and post-test phases of the various crash tests. Fuel cells without hydrogen, or filled with anything else,⁸ generate no electricity from which to measure electrical output. A determination as to whether FMVSS No. 305 will require further amendment to address FCV testing will await the results of ongoing research, and will not be addressed in this rulemaking.

C. Test Procedure Measurement Location on the Vehicle

FMVSS No. 305 (as well as previous versions of SAE J1766) currently requires the measurement of electrical isolation in only one location, between

³ For the reader's reference, ohms are a measure of electrical resistance, or how much the material of an electrical circuit resists the flow of electricity (thus, a higher number indicates more resistance), and volts are a measure of voltage, or how much electrical potential there is between any two points in a circuit (or, how much force is required to push the electrical current through the circuit).

⁴ SAE J1766 (rev. April 2005) states that "The conductivity of [the aqueous] coolant is a key factor in the isolation characteristics of a fuel cell. Coolant conductance [of electrical current] increases with time which decreases isolation."

⁵ It should be remembered that electrical isolation (ohms/volt) is a measure of a material's resistance

⁸ Such as helium, as suggested by SAE J2578, "Recommended Practice for General Fuel Cell Safety."

the high voltage bus⁹ and the vehicle chassis. If a vehicle has electrical contactors located within the battery pack, this single measurement is taken between the downstream side of the contactor and the vehicle chassis.

- The petitioner requested that FMVSS No. 305 be amended to mirror the revised SAE J1766, which specifies several electrical isolation verification locations instead of just one: (1) Across the high voltage bus bar; (2) between the high voltage source and the vehicle chassis; (3) between the high voltage return and the vehicle chassis; and (4) between the conductive energy storage device and the vehicle chassis.

NHTSA's response: We are proposing to change and add several definitions to FMVSS No. 305 in order to address this request. We agree that measurements should be taken from all high voltage sources for calculating electrical isolation from the vehicle chassis, because the risk of electric shock can come from any high voltage source and not just from the propulsion motor batteries. Additionally, we recognize that some electric-powered vehicles may have both AC and DC high voltage sources. Revised SAE J1766 added new definitions for energy storage devices, which take into consideration the fact that ultra-capacitors¹⁰ have replaced propulsion batteries in some electric-powered vehicle designs.

We therefore propose to add a new definition to S4 of FMVSS No. 305, to define "high voltage source" as either an electrical power-generating device or an energy storage device that produces voltage levels equal to or greater than 30 VAC or 60 VDC.¹¹ Other proposed changes to S4 include the addition of a definition for "electrical isolation," to reflect that isolation measurements are to be taken between any high-voltage source and the vehicle's chassis; and the deletion of the existing definition for "battery system component" and its replacement with a definition for "energy storage system" which includes ultra-capacitors, high voltage batteries, and their associated hardware. Several

other sections of FMVSS No. 305 would also be amended to reflect the changes proposed above.

D. Setting 0.2 Joules as an Appropriate Low Energy Threshold

- The petitioner requested that FMVSS No. 305 also be amended to mirror revised SAE J1766 insofar as that standard specifies an energy level below 0.2 joules as another appropriate way to provide electrical safety protection. The petitioner noted that the 0.2 joules of energy value specified in SAE J1766 was derived using data from the IEC 479-1 charts, and is non-harmful.¹² The petitioner also noted for comparison that static electricity, which can involve voltages of more than 10,000 volts, is nevertheless benign to human health due to the low current and short durations associated with discharge.

NHTSA's response: We are seeking comments on the inclusion of 0.2 joules as an appropriate low energy threshold in FMVSS No. 305 to reflect that low amounts of electrical energy are acceptable. The agency remains less than fully convinced of the need for this amendment. The SAE's methodology, assuming a 10 ms duration of contact, does not seem realistic in the context of an automobile crash, and in fact would be much more typical as a result of static buildup than a fault contact with a high voltage electrical system after a crash.

Additionally, NHTSA is concerned about the practicality of measuring a mere 0.2 joules of energy in a crash test environment. Comment to help the agency resolve this issue is requested.

E. Harmonizing FMVSS No. 305's Rear Impact Test Procedure With FMVSS No. 301

The original version of FMVSS No. 305¹³ incorporated the rear moving barrier test of FMVSS No. 301, *Fuel System Integrity*, which at the time was a 30 mph (48 km/h) test. In a 2004 final rule, response to petitions for reconsideration on FMVSS No. 301,¹⁴ the agency amended FMVSS No. 305 to give manufacturers the option of conducting either a rigid moving barrier 48-km/h test, or an upgraded-FMVSS No. 301 moving deformable barrier 80-km/h test. We stated that:

Prior to the upgrade of the FMVSS No. 301 rear moving barrier impact test, compliance with the FMVSS Nos. 301 and 305 rear moving barrier requirements was based on

¹² This was based on 200 mA of current, with a duration of 10 ms and a voltage of 200V with a safety factor of 2.

¹³ The final rule promulgating FMVSS No. 305 is available at 65 FR 57980-57992 (Sept. 27, 2000).

¹⁴ 69 FR 51393 (Aug. 19, 2004).

similar test conditions and procedures. The similarity in test conditions gave manufacturers of gas-electric hybrid vehicles the opportunity to conduct one test instead of two to determine compliance with the two sets of rear impact requirements. Gas-electric hybrid vehicles with a GVWR of 4,536 kg or less are subject to the rear moving impact requirements of both FMVSS Nos. 301 and 305, if they use both liquid fuel and more than 48 nominal volts of electricity as propulsion power. As a result of the FMVSS No. 301 upgrade, compliance with the FMVSS Nos. 301 and 305 rear moving barrier requirements is no longer based on similar test conditions and procedures. The differences in the conditions and procedures could eliminate the opportunity to conduct one test instead of two for gas-electric hybrid vehicles. To reinstate the opportunity to conduct two tests instead of one, we are amending FMVSS No. 305 to permit compliance with the electrolyte spillage, battery retention and electrical isolation rear moving barrier impact requirements of FMVSS No. 305 under the upgraded FMVSS No. 301 rear moving barrier test conditions.¹⁵

- The petitioner requested that the rear impact test speed of FMVSS No. 305 should be amended to correspond with the 80 km/h speed now required by FMVSS No. 301. The petitioner also stated that this would align FMVSS No. 305 with the recently amended Canadian Motor Vehicle Safety Standard 305, which requires the 80 km/h speed for vehicles produced after September 1, 2009.

NHTSA's response: We are proposing to amend FMVSS No. 305 to specify only the 80 km/h test. NHTSA agrees that the rear test speed for FMVSS No. 305 should reflect the speed required in FMVSS No. 301, which is currently being phased in and will be required for all vehicles with liquid fuel systems manufactured after September 1, 2009. As noted by the Alliance, this change would also facilitate harmonization with Canadian Standard 305. Therefore, NHTSA proposes to amend FMVSS No. 305 to specify only the 80 km/h rear impact test, with S6.2 and S7.4 changed accordingly.

III. International Harmonization

As long as safety is preserved, NHTSA believes that the same voltage should be used worldwide to denote high voltage systems, because vehicle manufacturers (and ultimately, consumers) can expect to achieve cost savings through the harmonization of different sets of standards. However, NHTSA is not ready just yet to harmonize fully with other international standards. Globally, there are several existing regulations and standards that pertain to high voltage systems in electric-powered

¹⁵ Id., at 51396.

⁹ A high voltage bus (or bus-bar) is a distribution location where multiple connections are made for the electrical circuits.

¹⁰ Ultra-capacitors act like batteries in that they store electrical energy and pose the same electrical safety hazards as batteries, except for electrolyte spillage.

¹¹ We note that unlike SAE J1766, which specifies "high-voltage systems" as greater than 60 VDC or 30 VAC, ECE R.100 specifies high-voltage systems as greater than 60 VDC or 25 VAC. The AC high voltage value may eventually change in the final rule to make the definition consistent, pending the development of an internationally-consistent definition of high-voltage system through a global technical regulation (see discussion in Section III below, "International Harmonization").

motor vehicles. The agency has been collaborating with the international community to develop a global technical regulation (GTR) for hydrogen-powered motor vehicles through its active participation in the United Nations World Forum for the Harmonization of Vehicle Regulations (WP.29). It has been agreed by WP.29 that a GTR be developed for hydrogen-powered motor vehicles. The United States, Germany, and Japan as sponsors have completed development of an action plan that outlines the key safety areas of hydrogen and FCVs for the GTR. The definition of high voltage systems in automobiles would likely be part of the development of this GTR.

The existing requirements in the European regulation, ECE R.100, "Uniform provisions concerning the approval of battery electric vehicles with regard to specific requirements for the construction, functional safety and hydrogen emission," specify that battery-powered electric vehicles must maintain 500 ohms/volt electrical isolation between the propulsion battery and the vehicle chassis. This is similar to the requirement in FMVSS No. 305. NHTSA is aware that the ECE is currently considering changing this requirement to meet a 100 ohms/volt electrical isolation between the high voltage system and the vehicle chassis, without distinguishing between AC (greater than 25 volts) or DC (greater than 60 volts) electrical current. The ECE's draft amendments also allow for up to 10 milliamps of continuous electrical current or 100 ohms/volt of resistance. NHTSA has also examined the recent Japanese regulation TRIAS 11-1-4-101, "Technical Standard for Protection of Occupants Against High Voltage in Fuel Cell Vehicles," which requires 100 ohms/volt electrical isolation between the chassis and the high-voltage system of those vehicles whose operating voltage is greater than 60 VDC.

Despite our interest in international harmonization, NHTSA does not believe that allowing 10 milliamps of continuous electrical current is sufficiently safe. Even for a duration of 2 seconds, 10 milliamps of AC electrical current could result in a reversible disturbance in the heart (such as atrial fibrillation and transient cardiac arrest without ventricular fibrillation).¹⁶ Because of this, NHTSA is not proposing any changes to the existing isolation requirements for AC high voltage sources. Similarly, NHTSA does not believe that a change from the

existing ECE requirement of 500 ohms/volt isolation to a requirement of 100 ohms/volt isolation, without distinguishing between AC and DC current, would be consistent with the best interests of safety. Additionally, neither the Alliance petition nor the revised SAE J1766 recommend any changes to the existing requirement of 500 ohms/volt isolation between AC high voltage sources and the chassis. Public comment is requested on the above values for electrical isolation and continuous current.

IV. The Proposed Rule

A. Amending FMVSS No. 305 To Accommodate Fuel Cell Vehicles

This NPRM proposes to amend FMVSS No. 305 by revising certain sections in order to realign the standard with the April 2005 update of SAE J1766 that was changed to accommodate fuel cell vehicles and avoid hindering the development of that market. The following points highlight the key provisions of the proposed requirements:

- The NPRM would change the applicability of FMVSS No. 305 to accommodate state-of-the-art FCVs that use 60 VDC or 30 VAC or more for propulsion power instead of the existing 48 nominal volts.
- The NPRM would distinguish between isolation values for DC and AC currents, setting the value for DC high-voltage systems at 125 ohms/volt.
- The NPRM would accommodate current FCV technology by changing the test requirement in S5.3 from "electrical isolation" alone to "electrical safety," which would also include an alternative requirement that the voltage between the high-voltage source and the vehicle chassis be less than 60 VDC or 30 VAC.
- The NPRM would add a definition for "high-voltage source," and amend the definition for "electrical isolation" to reflect that isolation measurements shall be taken from any high-voltage source and the vehicle's chassis, instead of from only one location.
- The NPRM would harmonize S6.2 and S7.4 of FMVSS No. 305 with the revised FMVSS No. 301, as regards rear moving barrier impact test conditions.

B. Effective Date

NHTSA here proposes that the effective date of this rulemaking apply to vehicles manufactured one year after the final rule is published, with optional early compliance. The agency believes that one year should be sufficient for manufacturers to verify that they can meet the new electrical isolation requirements, particularly since similar

requirements already exist as a SAE recommended practice. Currently, all manufacturers of electric-powered vehicles already isolate the high voltage sources from the vehicle chassis.

IV. Benefits/Costs

NHTSA anticipates no quantifiable economic or fatality-reduction benefits from this proposed rule. The update to FMVSS No. 305 represents an increase in the stringency of the level of safety provided by the standard for FCVs that are currently in development but not yet on the roads. Because the safety benefits will be in the future, they are not currently quantifiable. Immediate benefits that will likely accrue are primarily of a policy nature: That the hydrogen FCV market will not be hindered in its continuing development, as the petitioner asserted; that various small inconsistencies that have lingered in the standard will be corrected; and so forth.

NHTSA believes that the cost associated with this rulemaking would be negligible. Any added cost would consist only of what was involved in taking additional readings at different test points within vehicles that have both AC and DC power systems. Moreover, the vehicle manufacturers potentially affected by this proposed rule were involved in the update of SAE J1766 (which was revised to accommodate their current FCV designs), and are presumably already complying with that standard, so the additional cost of compliance with the proposed rule should be de minimis if not zero.

VI. Public Participation

How Do I Prepare and Submit Comments?

Your comments must be written and in English. To ensure that your comments are filed correctly in the Docket, please include the docket number of this document in your comments.

Your comments must not be more than 15 pages long (*see* 49 CFR 553.21). We established this limit to encourage you to write your primary comments in a concise fashion. However, you may attach necessary additional documents to your comments. There is no limit on the length of the attachments.

Please submit two copies of your comments, including the attachments, to Docket Management at the address given under **ADDRESSES**.

You may also submit your comments to the docket electronically by logging onto the Dockets Management System website at <http://dms.dot.gov>. Click on

¹⁶ IEC 479-1, Table 4—Time/current zones for a.c. 15 Hz to 100 Hz, p. 41.

“Help & Information,” or “Help/Info” to obtain instructions for filing the document electronically.

How Can I Be Sure That My Comments Were Received?

If you wish Docket Management to notify you upon its receipt of your comments, enclose a self-addressed, stamped postcard in the envelope containing your comments. Upon receiving your comments, Docket Management will return the postcard by mail.

How Do I Submit Confidential Business Information?

If you wish to submit any information under a claim of confidentiality, you should submit three copies of your complete submission, including the information you claim to be confidential business information, to the Chief Counsel, NHTSA, at the address given above under **FOR FURTHER INFORMATION CONTACT**. In addition, you should submit two copies, from which you have deleted the claimed confidential business information, to Docket Management at the address given above under **ADDRESSES**. When you send a comment containing information claimed to be confidential business information, you should include a cover letter setting forth the information specified in our confidential business information regulation (49 CFR part 512).

Will The Agency Consider Late Comments?

We will consider all comments that Docket Management receives before the close of business on the comment closing date indicated above under **DATES**. To the extent possible, we also will consider comments that Docket Management receives after that date. If Docket Management receives a comment too late for us to consider it in developing the final rule, we will consider that comment as an informal suggestion for future rulemaking action.

How Can I Read The Comments Submitted By Other People?

You may read the comments received by Docket Management at the address given under **ADDRESSES**. The hours of the Docket are indicated above in the same location.

You also may see the comments on the Internet. To read the comments on the Internet, go to <http://www.regulations.gov>, and follow the instructions for accessing the Docket.

Please note that even after the comment closing date, we will continue to file relevant information in the

Docket as it becomes available. Further, some people may submit late comments. Accordingly, we recommend that you periodically check the Docket for new material.

VII. Rulemaking Analyses and Notices

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

This rulemaking document was not reviewed by the Office of Management and Budget under E.O. 12866. It is not considered to be significant under E.O. 12866 or the Department's Regulatory Policies and Procedures (44 FR 11034; Feb. 26, 1979). This proposed rule should have no significant effect on the national economy, and simply clarifies for FCV manufacturers their obligations under FMVSS No. 305.

B. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act (5 U.S.C. 601 et seq., as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (i.e., small businesses, small organizations, and small governmental jurisdictions). The Small Business Administration's regulations at 13 CFR part 121 define a small business, in part, as a business entity “which operates primarily within the United States.” (13 CFR 121.105(a)). No regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities. SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities.

NHTSA has considered the effects of this proposed rule under the Regulatory Flexibility Act. I certify that this proposed rule would not have a significant economic impact on a substantial number of small entities. Any small manufacturers that might be affected by this proposed rule are already subject to the requirements of FMVSS No. 305, and the testing costs added by this proposed rule are anticipated to be extremely small. Therefore, there should be only a very minor economic impact, if any.

C. Executive Order 13132 (Federalism)

NHTSA has examined today's final rule pursuant to Executive Order 13132 (64 FR 43255, August 10, 1999) and concluded that no additional consultation with States, local governments or their representatives is mandated beyond the rulemaking process. The agency has concluded that the rule does not have federalism implications because the rule does not have “substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.”

Further, no consultation is needed to discuss the preemptive effect of today's rule. NHTSA rules can have preemptive effect in at least two ways. First, the National Traffic and Motor Vehicle Safety Act contains an express preemptive provision: “When a motor vehicle safety standard is in effect under this chapter, a State or a political subdivision of a State may prescribe or continue in effect a standard applicable to the same aspect of performance of a motor vehicle or motor vehicle equipment only if the standard is identical to the standard prescribed under this chapter.” 49 U.S.C. 30103(b)(1). It is this statutory command that preempts State law, not today's rulemaking, so consultation would be inappropriate.

In addition to the express preemption noted above, the Supreme Court has also recognized that State requirements imposed on motor vehicle manufacturers, including sanctions imposed by State tort law, can stand as an obstacle to the accomplishment and execution of a NHTSA safety standard. When such a conflict is discerned, the Supremacy Clause of the Constitution makes their State requirements unenforceable. *See Geier v. American Honda Motor Co.*, 529 U.S. 861 (2000). NHTSA has not outlined such potential State requirements in today's rulemaking, however, in part because such conflicts can arise in varied contexts, but it is conceivable that such a conflict may become clear through subsequent experience with today's standard and test regime. NHTSA may opine on such conflicts in the future, if warranted. *See id.* at 883–86.

D. National Environmental Policy Act

NHTSA has analyzed this rulemaking action for the purposes of the National Environmental Policy Act. The agency has determined that implementation of this action will not have any significant

impact on the quality of the human environment.

E. Executive Order 12988 (Civil Justice Reform)

With respect to the review of the promulgation of a new regulation, section 3(b) of Executive Order 12988, "Civil Justice Reform" (61 FR 4729, February 7, 1996) requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) Clearly specifies the preemptive effect; (2) clearly specifies the effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct, while promoting simplification and burden reduction; (4) clearly specifies the retroactive effect, if any; (5) adequately defines key terms; and (7) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. This document is consistent with that requirement.

Pursuant to this Order, NHTSA notes as follows. The preemptive effect of this rule is discussed above. NHTSA notes further that there is no requirement that individuals submit a petition for reconsideration or pursue other administrative proceeding before they may file suit in court.

F. Privacy Act

Please note that anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477–78), or you may visit <http://DocketInfo.dot.gov>.

G. Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995 (PRA), a person is not required to respond to a collection of information by a Federal agency unless the collection displays a valid OMB control number. There are no information collection requirements associated with this NPRM, nor would there be information collection requirements if this proposed rule were to be made final.

H. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104–113 (15 U.S.C. 272) directs the agency

to evaluate and use voluntary consensus standards in its regulatory activities unless doing so would be inconsistent with applicable law or is otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies, such as the Society of Automotive Engineers (SAE). The NTTAA directs us to provide Congress (through OMB) with explanations when the agency decides not to use available and applicable voluntary consensus standards. The NTTAA does not apply to symbols.

FMVSS No. 305 has historically drawn largely from SAE J1766, and does so again for this current rulemaking, which updates FMVSS No. 305 based on a recent updating of SAE J1766. NHTSA is not, however, adopting SAE J1766 verbatim, for the reasons discussed in Section C(1) above, and is proposing an isolation level of 125 ohms/volt instead of 100 ohms/volt for DC current. The agency believes that this will best avoid reducing the safety benefits of FMVSS No. 305 as it is currently written.

NHTSA requests public comment on the appropriateness of also considering the 2006 International Organization for Standardization (ISO) standard ISO 23273–3, "Fuel cell road vehicles—Safety specifications—Part 3: Protection of persons against electric shock."

List of Subjects in 49 CFR Part 565

Imports, Motor vehicles, Motor vehicle safety, and Tires.

In consideration of the foregoing, NHTSA proposes to amend 49 CFR Part 571.305 as follows:

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

1. The authority citation for part 571 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. Amend § 571.305 by revising S1, S2, S3, S4, S5.2, S5.3, S6.2, S7, S7.1, S7.2, S7.4, S7.6, S7.6.1, S7.6.2, S7.6.3, S7.6.4, S7.6.5, S7.6.6, and S7.6.7 to read as follows:

§ 571.305 Standard No. 305; Electric-powered vehicles: Electrolyte spillage and electrical shock protection.

S1 *Scope.* This standard specifies requirements for limitation of electrolyte spillage, retention of energy storage devices, and protection from

harmful electric shock during and after a crash.

S2 *Purpose.* The purpose of this standard is to reduce deaths and injuries during a crash which occur because of electrolyte spillage from energy storage devices, intrusion of energy storage device system components into the occupant compartment, and electrical shock.

S3 *Application.* This standard applies to passenger cars, and to multipurpose passenger vehicles, trucks and buses with a GVWR of 4536 kg or less, that use more than 60 volts direct current (VDC) or 30 volts alternating current (VAC) of electricity as propulsion power and whose speed attainable over a distance of 1.6 km on a paved level surface is more than 40 km/h.

S4 Definitions.

Dummy means a 50th percentile male test dummy as specified in subpart F of part 572 of this chapter.

Electrical isolation means the electrical resistance between the vehicle high-voltage source and any vehicle conductive structure.

Energy storage system means the components comprising, but not limited to, the vehicle's high-voltage battery system or capacitor system. These include, but are not limited to, the battery or capacitor modules, interconnects, venting systems, battery or capacitor restraint devices, and energy storage boxes or containers that hold the individual battery or capacitor modules.

High-voltage source means any item that produces voltage levels equal to or greater than 30 VAC or 60 VDC.

VAC means volts of alternating current (AC).

VDC means volts of direct current (DC).

* * * * *

S5.2 *Energy storage device retention.* Energy storage system modules located inside the passenger compartment must remain in the location in which they are installed. Any energy storage system component that is located outside the passenger compartment must not enter the passenger compartment during the test procedures of S6 of this standard, as determined by visual inspection.

S5.3 *Electrical safety.* After each test, electrical isolation and energy between any high-voltage source and the vehicle chassis electricity-conducting structure must meet the following:

(a) For AC high-voltage systems, electrical isolation is not less than 500 ohms/volt; or

(b) For DC high-voltage systems, electrical isolation is not less than 125 ohms/volt.

* * * * *

S6.2 Rear moving barrier impact. The vehicle must meet the requirements of S5.1, S5.2, and S5.3 when it is impacted from the rear by a barrier that conforms to S7.3(b) of Sec. 571.301 of this chapter and that is moving at any speed up to and including 80 km/h (50 mph) with dummies positioned in accordance with S6.2 of Sec. 571.301 of this chapter.

* * * * *

S7 Test conditions. When the vehicle is tested according to S6, the requirements of S5 must be determined by the conditions specified in S7.1 through S7.6.7. All measurements for calculating electrical isolation or the amount of electrical energy will be made after a minimum of 5 seconds immediately after the tests specified in S6. Where a range is specified, the vehicle must be capable of meeting the requirements at all points within the range.

S7.1 Energy storage device state of charge. The energy storage device is at the level specified in the following paragraphs (a), (b), or (c), as appropriate:

(a) At the maximum state of charge recommended by the manufacturer, as stated in the vehicle operator's manual or on a label that is permanently affixed to the vehicle;

(b) If the manufacturer has made no recommendation, at a state of charge of not less than 95 percent of the maximum capacity of the energy storage device; or

(c) If the energy storage device(s) are rechargeable only by an energy source on the vehicle, at any state of charge

within the normal operating voltage, as defined by the vehicle manufacturer.

S7.2 Vehicle conditions. The switch or device that provides power from the high-voltage system to the propulsion motor(s) is in the activated position or the ready-to-drive position.

* * * * *

S7.4 Rear moving barrier impact test conditions. In addition to the conditions of S7.1 and S7.2, the conditions of S7.5 and S7.6 of Sec. 571.301 of this chapter apply to the conducting of the rear moving deformable barrier impact test specified in S6.2.

* * * * *

S7.6 Electrical isolation test procedure. In addition to the conditions of S7.1 and S7.2, the conditions in S7.6.1 through S7.6.7 apply to the measuring of electrical isolation specified in S5.3.

S7.6.1 Prior to any barrier impact test, the high-voltage system is connected to the vehicle's propulsion system, and the vehicle ignition is in the "on" (traction (propulsion) system energized) position. If the vehicle utilizes an automatic disconnect between the high-voltage system and the traction system that is physically contained within the high-voltage system, the electrical isolation measurement after the test is made from the traction system side of the automatic disconnect to the vehicle chassis. If the vehicle utilizes an automatic disconnect that is not physically contained within the high-voltage system, the electrical isolation measurement after the impact is made from the high-voltage source side of the automatic disconnect to the vehicle chassis.

S7.6.2 The voltmeter used in this test has an internal resistance of at least 10 MΩ.

S7.6.3 The voltage(s) is/are measured as shown in Figure 1 and the high-voltage source voltage(s) (Vb) is/are recorded. Before any vehicle impact test, Vb is equal to or greater than the nominal operating voltage as specified by the vehicle manufacturer.

S7.6.4 The voltage(s) is/are measured as shown in Figure 2, and the voltage(s) (V1) between the negative side of the high-voltage source and the vehicle chassis is/are recorded.

S7.6.5 The voltage(s) is/are measured as shown in Figure 3, and the voltage(s) (V2) between the positive side of the high-voltage source and the vehicle chassis is/are recorded.

S7.6.6 If V1 is greater than or equal to V2, insert a known resistance (Ro) between the negative side of the high-voltage source and the vehicle chassis. With the Ro installed, measure the voltage (V1') as shown in Figure 4 between the negative side of the high-voltage source and the vehicle chassis. Calculate the electrical isolation (Ri) according to the formula shown.

S7.6.7 If V2 is greater than V1, insert a known resistance (Ro) between the positive side of the high-voltage source and the vehicle chassis. With the Ro installed, measure the voltage and record the voltage (V2') between the positive side of the high-voltage source and the vehicle chassis as shown in Figure 5. Calculate the electrical isolation (Ri) according to the formula shown.

* * * * *

3. Further amend § 571.305 by revising Figures 1, 2, 3, 4, and 5 following S7.6.7 to read as follows:

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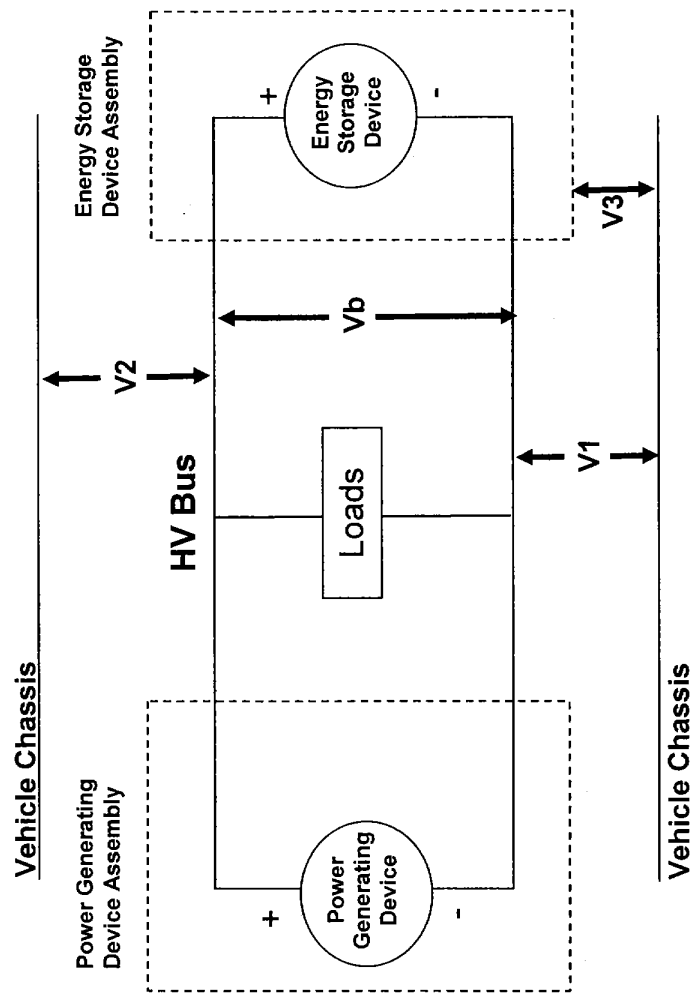


Figure 1. S7.6.6 Measurement of High Voltage Source for Vb Voltage

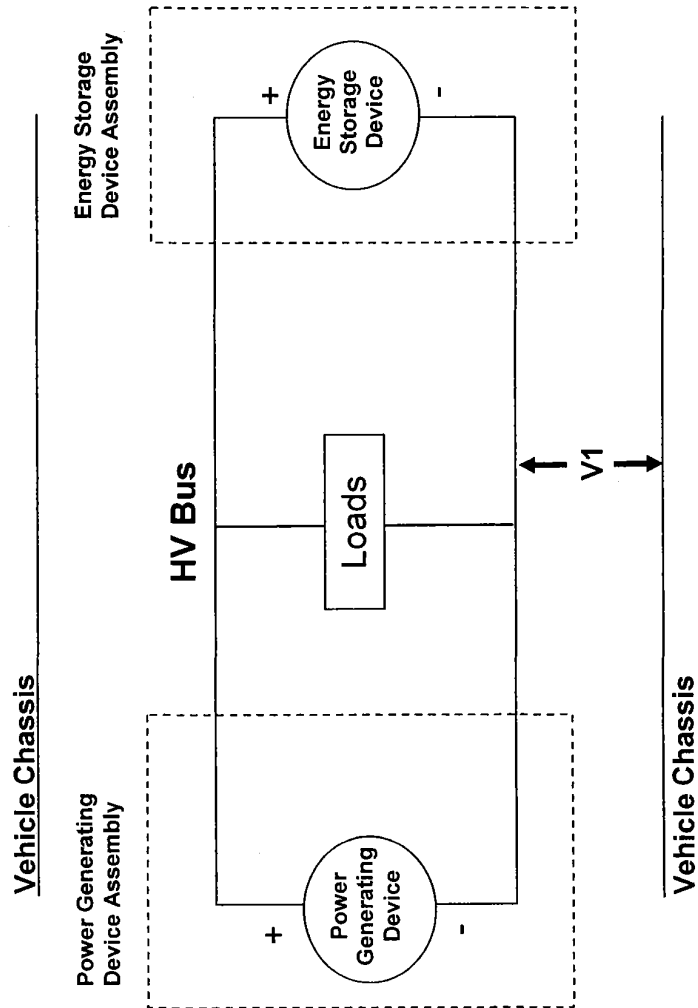


Figure 2. S7.6.4 Measurement for V1 Voltage between the Negative Side of the High Voltage Source and the Vehicle Chassis

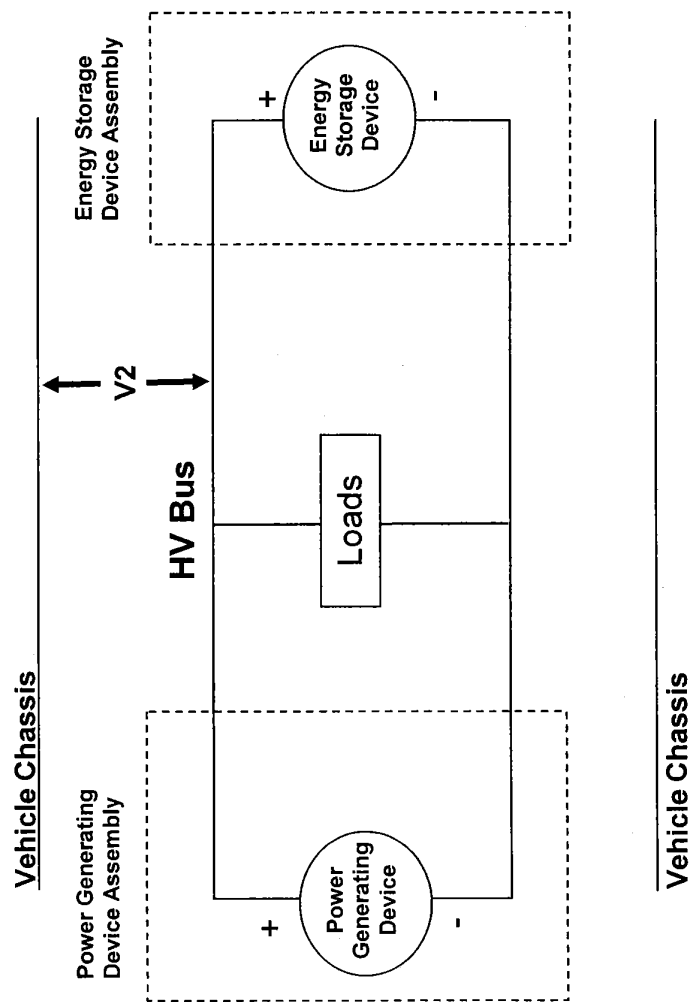


Figure 3. S7.6.5 Measurement for V2 Voltage between the Positive Side of the High Voltage Source and the Vehicle Chassis

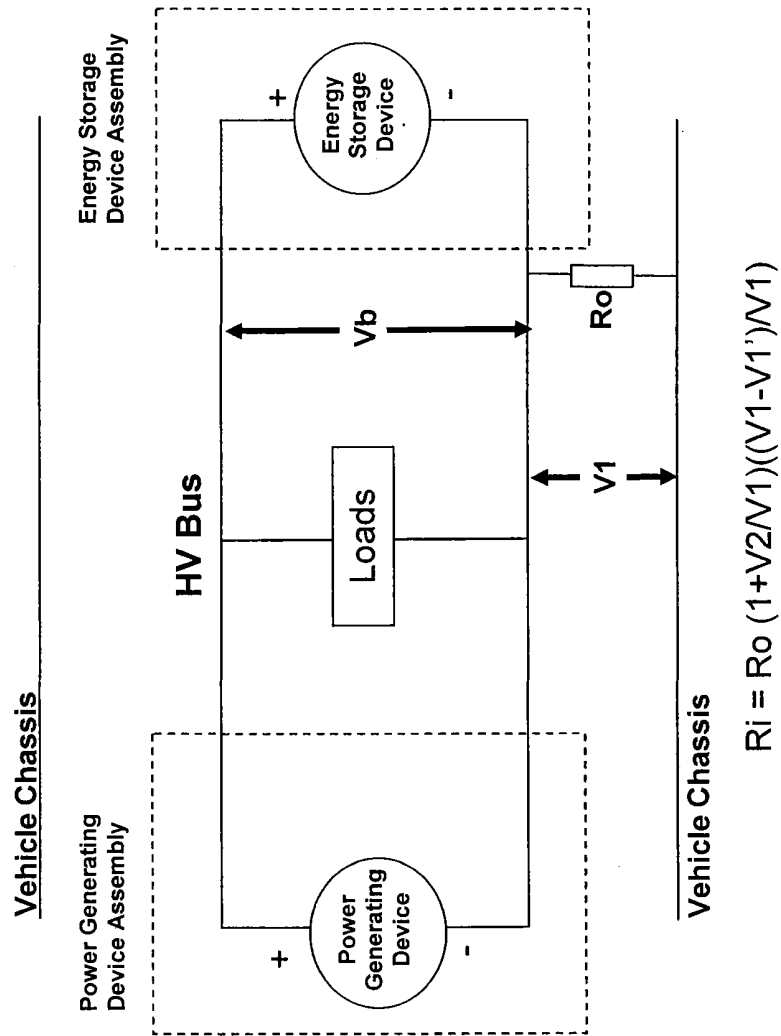


Figure 4. S7.6.6 Measurement for V_1' Voltage across Resistor between Negative Side of the High Voltage Source and Vehicle Chassis

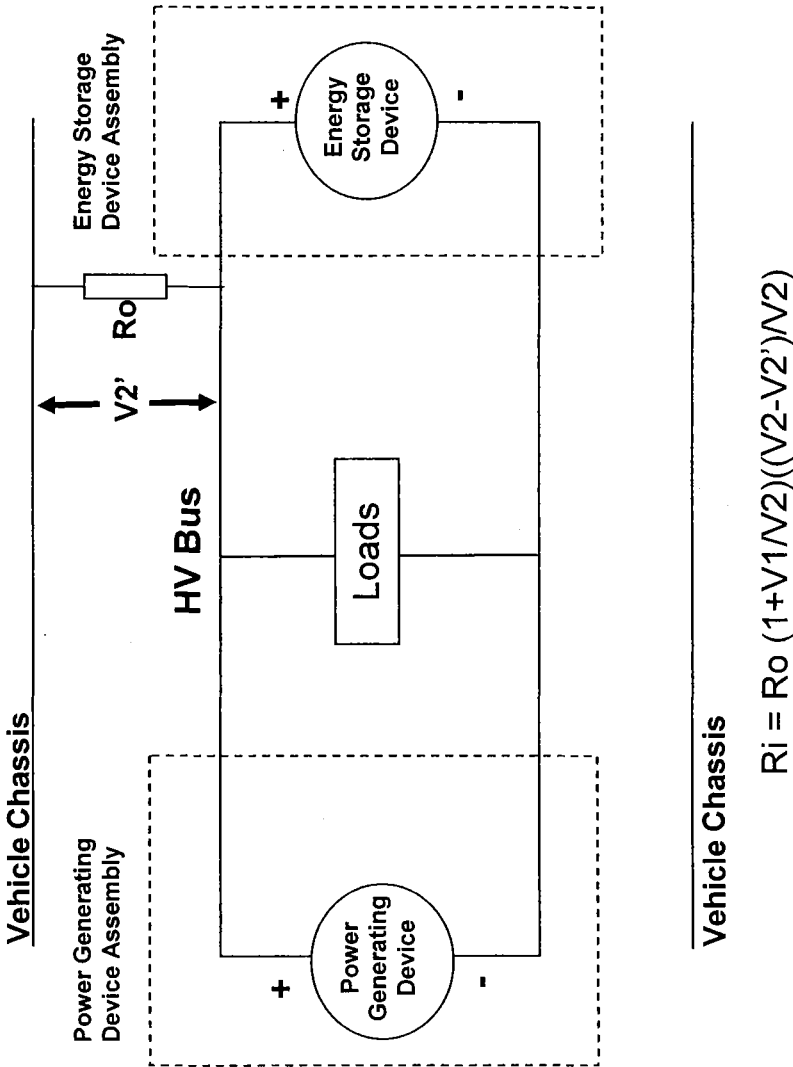


Figure 5. S7.6.7 Measurement for V_2' Voltage across Resistor between Positive Side of the High Voltage Source and Vehicle Chassis

Issued: October 2, 2007.

Stephen R. Kratzke,

Associate Administrator for Rulemaking.

[FR Doc. E7-19735 Filed 10-5-07; 8:45 am]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition To List the Giant Palouse Earthworm as Threatened or Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 90-day petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on a petition to list the giant Palouse earthworm (*Driloleirus americanus*) as threatened or endangered under the Endangered Species Act of 1973, as amended. We find that the petition does not provide substantial scientific or commercial information to indicate that listing the giant Palouse earthworm may be warranted. Therefore, we will not be initiating a status review in response to this petition. However, we encourage the public to submit to us any new information that becomes available concerning this species.

DATES: The finding announced in this document was made on October 9, 2007.

ADDRESSES: Data and new information concerning the giant Palouse earthworm may be submitted to the Supervisor, Upper Columbia Fish and Wildlife Office, U.S. Fish and Wildlife Service, 11103 East Montgomery Drive, Spokane, WA 99206. The petition, administrative finding, supporting data, and comments received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Susan Martin, Field Supervisor, at the above address, by phone at (509) 891-6838, or facsimile at (509) 891-6748. Please include "giant Palouse earthworm scientific information" in the subject line for faxes. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act), requires that we make a finding on whether a petition to list, delist, or reclassify a species, presents substantial scientific or commercial information to indicate that the petitioned action may be warranted. To the maximum extent practicable, we are to make the finding within 90 days of our receipt of the petition, and publish a notice of the finding promptly in the **Federal Register**.

This finding summarizes the information included in the petition and information available to us at the time of the petition review. Under section 4(b)(3)(A) of the Act and our regulations in 50 CFR 424.14(b), our review of a 90-day finding is limited to a determination of whether the information in the petition meets the "substantial information" threshold. Our standard for substantial information within the Code of Federal Regulations (CFR) with regard to a 90-day petition finding is "that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted" (50 CFR 424.14(b)). If we find that substantial information was presented, we are required to promptly commence a review of the status of the species.

We have to satisfy the Act's requirements that we use the best available science to make our decisions. However, we do not conduct additional research at this point, nor do we subject the petition to rigorous critical review. Rather, at the 90-day finding stage, we accept the petitioners' sources and characterizations of the information, to the extent that they appear based on accepted scientific principles (such as citing published and peer-reviewed articles, or studies done in accordance with valid methodologies), unless we have specific information to the contrary. Our finding considers whether the petition states a reasonable case that listing may be warranted based on the information presented. Thus, our 90-day finding expresses no view as to the ultimate issue of whether the species should be listed.

On August 30, 2006, we received a petition, dated August 18, 2006, from a private citizen and five other concerned parties requesting that we emergency list the giant Palouse earthworm (*Driloleirus americanus*) as threatened or endangered, and that critical habitat be designated concurrently with the listing. The other five concerned parties include the Palouse Prairie Foundation, the Palouse Audubon Society, Friends

of the Clearwater, and two other private citizens (hereafter referred to as the petitioners). The petition clearly identified itself as a petition and included the requisite identification information for the petitioners, as required in 50 CFR 424.14(a). The petition contained information on the natural history of the giant Palouse earthworm and potential threats to the species. Potential threats discussed in the petition include destruction and modification of habitat, disease and predation, inadequacy of regulatory mechanisms, and other natural and manmade factors, such as invasive and noxious weeds and road-building activities.

On October 2, 2006, we notified the petitioners that our initial review of the petition for the giant Palouse earthworm concluded that an emergency listing was not warranted, and that, due to court orders and judicially approved settlement agreements for other listing actions, we would not be able to further address the petition to list the giant Palouse earthworm at that time. This finding addresses the petition.

Species Information

The giant Palouse earthworm was first described by Frank Smith in 1897 after he discovered it near Pullman, Washington: "* * * this species is very abundant in that region of the country and their burrows are sometimes seen extending to a depth of over 15 feet." Although only a few specimens have been collected, early descriptions and collection locations indicated that the giant Palouse earthworm can be as long as 3 feet (0.9 meters) and is considered by some an endemic that utilizes grassland sites with good soil and native vegetation of the Palouse bioregion (James 1995, p. 1; Niwa *et al.* 2001, p. 34). It has been described as an Anecic earthworm, one of three basic earthworm types, based on its functional role in the soil ecosystem. Anecic earthworms are the largest and longest lived (James 2000, pp. 8-10, 1995, p. 6). Anecic earthworms uniquely contribute to the soil ecosystem by transporting fresh plant material from the soil surface to subterranean levels. The deep burrows also aid in water infiltration (James 2000, p. 9; Edwards 2004, pp. 30-31).

Population Status

The petition stated that since the initial description of the giant Palouse earthworm, sightings have been extremely infrequent. In 2005, a University of Idaho graduate student conducting soil samples was the first person in nearly two decades to report