

feels that the resources developed by the Massachusetts Department of Labor and Workforce Development are adequate to effectively implement and administer the asbestos program in Massachusetts.

6. Final approval of the program by EPA will require effective implementation and continued use of the EPA-approved NAIS, logging and tracking system, enforcement strategy and standard operating procedures, enforcement response policy, and communication strategy. EPA's final approval of the State's program will require the State to continue to provide adequate resources to support the administration of the program.

The reporting and recordkeeping provisions relating to State waivers from the requirements of the Asbestos-Containing Materials in Schools Rule at 40 CFR part 763 have been approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 and its implementing regulations at 5 CFR part 1320 and assigned OMB control number 2070-0091.

With this notice, EPA is hereby announcing receipt of the State's request and soliciting written comments from the public pertaining to the Commonwealth of Massachusetts' AHERA waiver request. Comments must be submitted by July 24, 1998. If during the comment period, EPA receives a written objection to the State's request, EPA will schedule a hearing to be held in the Commonwealth after the close of the comment period.

The official record for this document, as well as the public version, has been established for this document under docket control number "OPPTS-62155" (including comments and data submitted electronically as described below). A public version of this record, including printed, paper versions of electronic comments, which does not include any information claimed as CBI, is available for inspection from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The official record is located at the address in "ADDRESSES" at the beginning of this document.

Electronic comments can be sent directly to EPA at:

bryson.jamesm@epamail.epa.gov

Electronic comments must be submitted as an ASCII file avoiding the use of special characters and any form of encryption. Comment and data will also be accepted on disks in Wordperfect 5.1/6.1 or ASCII file format. All comments and data in electronic form must be identified by the docket control number "OPPTS-62155." Electronic comments on this

document may be filed online at many Federal Depository Libraries.

#### List of Subjects in Part 763

Environmental protection, Asbestos, Administrative practice and procedure, Hazardous substances, Imports, Intergovernmental relations, Labeling, Occupational safety and health, Reporting and recordkeeping requirements, Schools.

Dated: June 15, 1998.

**John P. DeVillars,**

*Regional Administrator, Region I.*

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## DEPARTMENT OF TRANSPORTATION

### National Highway Traffic Safety Administration

#### 49 CFR Part 571

[Docket No. NHTSA 98-3967; Notice 1]

RIN 2127-AG88

### Federal Motor Vehicle Safety Standards; Lamps, Reflective Devices, and Associated Equipment

**AGENCY:** National Highway Traffic Safety Administration (NHTSA), DOT.

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** This document proposes to amend the Federal motor vehicle safety standard on lighting to relieve design restrictions that may inadvertently prevent the implementation of certain new-technology light sources in motor vehicle lamps. These are light emitting diodes (LEDs) and miniature halogen bulbs. The standard would be amended to add two paragraphs reflecting SAE specifications for measurement of photometrics in taillamps and in certain stop and turn signal lamps with more than one lighted section and for LED heat testing. The agency issued a proposal on these issues in 1994, but terminated rulemaking the following year. These issues are being revisited in response to a petition for rulemaking from Reitter & Schefenacker GmbH & Co. KG.

**DATES:** Comments are due on the proposal August 10, 1998. The proposed effective date is one year after publication of the final rule. However, the agency is soliciting comments on whether optional compliance should be allowed in advance of that date.

**ADDRESSES:** Comments should refer to the docket number and notice number, and be submitted to: Docket Management, Room PL-401, 400

Seventh Street, S.W., Washington, D.C. 20590 (Docket hours are from 10:00 a.m. to 5:00 p.m.)

#### FOR FURTHER INFORMATION CONTACT:

Chris Flanigan, Office of Safety Performance Standards (202-366-4918).

#### SUPPLEMENTARY INFORMATION:

#### Introduction

On April 8, 1994, the agency published a notice of proposed rulemaking (NPRM) to amend Federal Motor Vehicle Safety Standard No. 108, "Lamps, Reflective Devices, and Associated Equipment," to relieve design restrictions that may inadvertently prevent the implementation of certain new-technology light sources in lamps (59 FR 16788). These new lamp technologies include light-emitting diodes (LEDs), miniature halogen bulbs, and other light sources with a limited luminous flux. Luminous flux is the total light emitted from a light source, in all directions. All these light sources will be referred to as "limited flux light sources" hereafter. Compared with light sources with traditional filaments, non-filament light sources such as LED and miniature halogen light sources emit only a fraction of the luminous flux of filament light sources. Consequently, to achieve the same performance as a single traditional filament light source, it is necessary to use multiple non-traditional light sources, hence their identification as "limited flux light sources." In the 1994 proposal, the agency asked for comment on how it might specify a means of determining the number of equivalent lighted sections for lamps equipped with these new lamp technologies. The agency wishes Standard No. 108 to be responsive to new technologies and to remove inadvertent impediments to their implementation. The notice also proposed a performance requirement to determine an LED lamp's ability to maintain photometric compliance under increased temperature conditions.

The requirements contained in Standard No. 108 for signal lamps are based on Society of Automotive Engineers (SAE) Standards and Recommended Practices that were developed to accommodate incandescent bulbs, i.e., those with filaments. These were developed many years before LEDs when incandescent bulbs were the only light sources in use at that time. New lighting source technologies have arisen that have fundamentally different characteristics than incandescent lamps. Thus, it is difficult to apply the specifications of Standard No. 108 to the new

technologies. Attempts to do so have revealed some ambiguities and inconsistencies with the design and method of performance of the new technologies. The SAE standards for taillamps, and for stop and turn signal lamps on vehicles with an overall width of less than 80 inches, treat a lamp having one bulb as a lamp with a single lighted section, a lamp having two bulbs as one with two lighted sections, and a lamp with three or more bulbs as one with three lighted sections. Thus, the standard requires that, if a lamp uses three or more light sources, it must meet the minimum photometric requirements of a three-compartment lamp. This becomes a problem when a manufacturer intends to make an LED lamp which is equal in size to a conventional incandescent lamp with one or two lighted sections. To make such an LED lamp, many more than three LEDs are needed. Typically, 15 or more are necessary. Thus, when there are three or more LEDs in one compartment, under current interpretations regarding the light output of one, two, and three-lighted section lamps, those LEDs must achieve the light intensity of a lamp with three lighted sections to comply with Standard No. 108. This results in a lamp which is overly bright in comparison with a similarly-sized single bulb/single lighted section incandescent lamp. This is because this lamp would be approximately one-third the size of a lamp with three lighted sections, and must achieve about 1.3 times the intensity of a lamp with a single lighted section. Further, it is unnecessarily expensive because a greater number of LEDs must be used to achieve the intensity of three lighted sections than would otherwise be used to achieve the intensity of a single lighted section.

In their comments on the 1994 NPRM, the American Automobile Manufacturers Association (AAMA), Ford Motor Company (Ford), and General Motors Corporation (GM) all indicated that they thought it was premature for the agency to specify unique requirements for lamps equipped with these light sources until studies could be completed to assess concerns regarding possible perceptions with respect to their brightness. AAMA wanted to gather data on intensity, brightness, and dimensional features (e.g., aspect ratio—the ratio of length to height) of signal and marker lamps of recent model vehicles. Other commenters could not reach a consensus on an appropriate specification.

Based on these comments, the agency concluded that, although the lighting

industry had a solution acceptable to it, there was a great uncertainty within the vehicle industry about the best method of regulating the photometric requirements of non-traditional light sources for signal and marker lamps. In view of this uncertainty on the part of the automotive industry, the agency terminated the rulemaking on June 19, 1995 (60 FR 31939), stating that it might reinstate it at a time when an outcome that would be more acceptable was a prospect. The termination also covered the proposed performance requirement to determine an LED lamp's ability to maintain photometric compliance under increased temperature conditions, as NHTSA anticipated that the industry, in a short time, would develop a test procedure more representative of the real world.

On February 6, 1997, Reitter & Schefenacker GmbH & Co. KG (Schefenacker), a lighting manufacturer, petitioned the agency to revisit this issue. Schefenacker stated that Standard No. 108 is design restrictive and a burden for vehicle and signal lamp manufacturers because it makes LED signal lamps unnecessarily expensive and, in certain cases, too large to fit on the vehicle. This is because, in nearly all cases, lamps which use LEDs must meet the requirements for a three-section lamp. This imposes design restrictions because the lamps must be made larger to accommodate the additional LEDs. According to Schefenacker, this can increase the cost of the lamp by 50 percent. The petitioner also stated that, due to the increased number of LEDs in the lamps, the brightness is increased and may cause discomfort glare to following drivers. Schefenacker argued that if Standard No. 108 were amended to account for the different characteristics of LEDs, the size of lamps would be comparable to conventional lamps and there would be no fundamental change in appearance. Based on these arguments, NHTSA has decided to reopen rulemaking.

The second issue addressed in the 1994 NPRM was the effect of heat on the luminous flux of LEDs. Unlike incandescent light sources, the luminous flux of LEDs drops rapidly as their temperature increases. This could be a problem if the lamps are illuminated for a long period of time, such as can occur with use of the hazard warning system or when stop lamps are applied in dense urban traffic. LEDs can also become heated if they are used in an environment with a relatively high ambient temperature. The agency's position on this issue has been that LEDs should conform at any

temperature in the motoring environment. The SAE addresses this characteristic in SAE Recommended Practice J1889 JUN88 "L.E.D. Lighting Devices." This specification contains tests which test the performance of LEDs at higher temperatures.

## Background

### *Limited Flux Light Sources*

The adoption of requirements for a center high-mounted stop lamp (CHMSL) has resulted in some creative solutions to the problem of integration of the lamp into the overall vehicle design. To reduce the size and obtrusiveness of the lamp, while maintaining the photometric conformance called for by Standard No. 108, manufacturers began to resort to smaller light sources. Limited flux light sources have been used in CHMSLs (because the standard contains no light source specifications for CHMSLs, any light source is permissible).

However, the application of Standard No. 108 to lamps with limited flux light sources raises the question as to how to determine compliance with photometric requirements, specifically, how to define a lighted section. SAE Standards J586 FEB84 and J588 NOV84 incorporated by reference and applying to stop lamps and turn signal lamps on vehicles whose overall width is less than 2032 mm (80 inches), and SAE Standard J585e September 1977, applying to taillamps on all vehicles, specify requirements to be met by lamps with one, two, and three lighted sections. These standards are based upon incandescent bulb technology where requirements are generally met by using one bulb for each lighted section. The specification of 32 candela per lighted section is based upon the highest output of contemporary incandescent signal lamp bulbs. When requirements are intended to be met by limited flux light sources, the light output specification cannot be provided by a single light source, but must be provided by multiple light sources. However, current interpretations of what is necessary to comply with Standard No. 108 do not contain any differentiations based upon the type of light source, only upon the number of light sources, because the SAE standards have not contained any differentiations based on type of light source. Thus, if 20 LEDs provide the same illumination as a single filament bulb, a lamp equipped with the former is considered a lamp with three lighted sections for purposes of compliance, not a single-section lamp. To meet the photometric requirements for three-

section lamps, manufacturers must use an overly bright and costly array of LEDs.

Schefenacker suggested three ways to address the problem. The first is to require lamps which use limited flux light sources to meet the photometric requirements of lamps with one lighted section regardless of the size of those lamps. The second is to use luminous flux limits by summing the luminous flux of LED's, thereby providing some method of equating the number of LEDs to the equivalent number of lighted sections: lamps with up to 32 candlepower (cp) would be considered as having one section; between 32 cp and 64 cp, as having two sections; and greater than 64 cp, as having three sections. A lamp's candlepower would be determined by summing the rated candlepowers for each individual light source in a lamp. For example, if a lamp used 40 LEDs, each with a rated candlepower of one cp, the lamp's candlepower would be 40 cp. Under this approach to the problem, the lamp would be considered to be a lamp with two lighted sections because the sum of the rated candlepower is between 32 and 64 cp. The third way is to use size-dependent criteria for determining the equivalent number of lighted sections. A lamp would be regarded as having the equivalent of one lighted section if the maximum horizontal or vertical linear dimension of the effective projected luminous lens area of the lamp is less than 150 millimeters (mm), two lighted sections if the dimension is 150–300 mm, and three lighted sections if the dimension is greater than 300 mm. This is the specification which is contained in SAE J1889 and which was also proposed in the 1994 NPRM.

Hewlett-Packard, a manufacturer of LEDs, recommended another method to deal with this issue. Under this approach, which the agency proposed in the 1994 NPRM as an alternative, lamps using LEDs or other limited flux light sources need only meet the intensity specifications for single-section lamps, provided that: (a) the maximum horizontal or vertical distance between the apparent optical centers of the closest adjacent light sources within the lighted section of the lamp are not greater than 2.0 centimeters (cm); and (b), if there were more than one lighted section, there is not more than 2.0 cm between the edge of the closest adjacent lighted sections. Measuring the distance between the optical centers would therefore provide an objective method for determining whether there is more than one lighted section.

Arguing that the LED requirements in SAE J1889 were far too limiting from

standpoints of cost and styling, Hewlett-Packard explained the rationale for its recommendation as follows:

SAE's higher intensity requirements for multiple compartment lighting devices stems from the fact that the apparent "brightness" of any light emitting area is not solely dependent on the intensity measured, but also the area of the emitter. Any two light sources can exhibit the same intensity measurement, while the source with the smaller light emitting area will appear brighter to the human eye. This is due to the nature of the human eye's perception of light, and is frequently taken into account in the design of "sterance [or brightness] matched" displays in the information display industry. This effect is also demonstrated by the response of consumers who mention that LED high mount stop lamps are very bright, when in fact they are designed to meet the same intensity requirements as incandescent high mount stop lamps. The difference is in the light emitting area. The smaller the light emitting area for a given intensity, the brighter the appearance to the human eye.

With this in mind, the proposed change in [Standard No. 108] will guarantee that at least a minimum level of brightness, or sterance, will be maintained regardless of length, area, or shape of the lighting device. This will allow lighting designers to fully realize all the benefits of styling and flexibility of LED lighting and provide a conspicuous and understandable signal device whether it be in tail, stop, or turn mode.

To the agency's knowledge, the vehicle industry has not come to a consensus on how to define the number of lighted sections in a lamp since NHTSA published the 1994 NPRM. Because of the multitude of lamp designs (different shapes, sizes, lens optics, etc.) installed in on today's vehicles, it may take more time to determine the best method. However, notwithstanding the absence of a consensus, the agency believes that it should move forward with rulemaking. Unlike 1994, when the agency issued a proposal on its own initiative, this time it is issuing a proposal in response to a petition from a member of the industry.

#### *Agency Proposal Regarding Limited Flux Light Sources*

This notice outlines the advantages and disadvantages of its proposed solution, as well as those of three alternative solutions suggested above. The public is invited to submit other recommendations. However, the agency wishes to make clear that if other recommendations are made and if they are substantially different from those which are proposed, their consideration could necessitate the issuance of a supplemental proposal and thereby prolong the rulemaking process. In any event, the agency plans to proceed to a final rule to resolve this issue.

The following is a discussion of possible solutions and their advantages and disadvantages:

1. At the present, the agency tentatively concludes that the most logical solution is the one that it is proposing: the adoption of size-dependent criteria for determining the equivalent number of lighted sections. A lamp would be regarded as having the equivalent of one lighted section if the maximum horizontal or vertical linear dimension of the effective projected luminous lens area of the lamp is less than 150 millimeters (mm), two lighted sections if the dimension is 150–300 mm, and three lighted sections if the dimension is greater than 300 mm. This is essentially the same specification contained in SAE J1889 and proposed by NHTSA in 1994. Schefenacker, too, recommended this solution. This specification was developed and accepted by the lighting industry for this very purpose. Further, adopting this specification would satisfy Federal requirements (i.e., National Technology Transfer and Advancement Act of 1995 and Office of Management and Budget Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities ) concerning Federal agencies' use of industry consensus standards except where inconsistent with law or otherwise impractical. Adopting accepted industry consensus standards eases the regulatory burden on manufacturers since many of them are already meeting them. However, given that SAE J1889 was adopted in 1988, an important question is whether the parameters remain representative of lamp designs that are in use now and those that are contemplated in the foreseeable future. NHTSA invites comments on this issue.

2. Another possible solution suggested by Schefenacker is that all lamps which use limited flux light sources meet the photometric requirements of lamps with one section. This specification assumes that a cluster of these bulbs will be used to achieve the same effect as one incandescent bulb. If, however, these bulbs are grouped with the intention of achieving the same effect as a two-section lamp with two incandescent bulbs, the lamp may be too dim. If a lamp with two or more sections is intended, the number of limited flux light sources which would normally be used for a one-section lamp could be spread out over the area of the multisection lamp. Such a lamp would comply with SAE J1889 and be less costly, but it would appear to observers to be only about half as bright as lamps that use normal

incandescent bulbs. This could present a problem in fog because the already-diffuse light emitting from the lamp would be diffused further by the fog.

3. Another alternative suggested by Schefenacker would be to use the luminous flux limits to determine the number of lighted sections. Lamps with up to 32 candlepower (cp) would be considered as having one section; between 32 cp and 64 cp, as having two sections; and greater than 64 cp, as having three sections. A lamp's candlepower would be determined by summing the rated candlepower for each individual light source in a lamp. For example, if a lamp used 40 LEDs, each with a rated candlepower of one cp, the sum would be 40 cp. Under this suggested way of addressing the problem, the lamp would be considered to be a two-section lamp because the sum of the rated candlepower is between 32 and 64 cp. This is an easily enforceable specification for some light sources, typically miniature halogen bulbs, as the ratings of the bulbs could be easily determined. Thus, each lamp would be clearly defined by the bulbs it is designed to use.

However, there may be some problems with this approach for manufacturers which produce LED and neon light sources. If the summed numbers do not represent the real world, or because of a lack of standardization, it is possible that this approach would not be viable. NHTSA therefore requests comments as to the representativeness of the numbers. This approach may also cause problems in the design of lamps. For example, if the optimal design for a certain lamp calls for 33 LEDs, rated at one cp per LED, the lamp would be required to comply with the two-section specifications. This is because the sum of the candlepower of the LEDs would total 33 cp, which is between 32 and 64 cp. To comply with the two-section requirements, more LEDs may have to be added to achieve the required level of brightness. This may make the lamp overly bright and costly, the same situation that exists today. However, the agency is interested in having comments on all the suggestions made by Schefenacker as discussed above.

4. Another alternative submitted by Hewlett-Packard was also proposed in the 1994 NPRM. Under this alternative, lamps using LEDs or other limited flux light sources need only meet the intensity specifications for single-section lamps, provided that: (a) the maximum horizontal or vertical distance between the apparent optical centers of the closest adjacent light sources within the lighted section of the

lamp are not greater than 2.0 centimeters (cm); and (b), if there were more than one lighted section, there is not more than 2.0 cm between the edge of the closest adjacent lighted sections.

This alternative would provide maximum flexibility for manufacturers who use LEDs because they could use many configurations. However, miniature halogen bulbs may be too large to put in some intricate configurations for lamp design, especially for manufacturers of LEDs such as Hewlett-Packard. Further, this approach may provide too much flexibility. For instance, it would allow a manufacturer to write its name in script form in lights, provided each light source was within 2.0 cm of another other, and thus have it considered a single-section lamp. A specification such as this could allow too much flexibility and result in lamps which are so unconventional in appearance that they would be likely to be misunderstood by the public. One goal of Standard No. 108 is to provide lamps which are fairly universal in appearance for assuring quick recognition of stop and turn signal lamps. This can be critical in many situations such as abrupt stops and turns. Nevertheless, the agency wishes to have informed opinion on this approach, and invites the public to comment on it.

Within the past year, the agency received a suggestion from the Chair and a member of the SAE Heavy Duty Lighting Standards Committee. Addressing the issue of LEDs and lighted sections, they recommended amending Standard No. 108's paragraph on definitions.

They would add a definition for "composite light source:"

Composite light source means a device consisting of two or more adjacent light sources, with or without common or individual primary reflectors, integrated and powered by one electronic module or electric circuit designed to function as a single, independent unit providing single or multiple lighting functions. The device forms an indivisible joined unit which cannot be dismantle without rendering it completely unusable.

They would also change the current definition of "multiple compartment lamp" to read:

Multiple compartment lamp means a lamp which provides its lighting function using two or more lighted areas, each of which is lighted by a separate, composite, or single light source, and which are joined by one or more common parts, such as a housing or lens.

While these definitions would help solve problems for lamps using LEDs, they would not resolve issues relating to

miniature halogen lamps or other miniature light sources. The last sentence of the definition suggested for "composite light source" specifies that the unit be indivisibly joined and not able to be dismantled without rendering it useless. Lamps that use LEDs generally incorporate a circuit board with all the LEDs permanently attached to it. However, other miniature light sources use bulbs that can be individually replaced. NHTSA believes that its rulemaking should take into account all miniature light sources. However, the agency invites comments on the approach discussed above.

A GM safety office employee has asked a staff member of the agency to consider an issue that is related to this rulemaking. Standard No. 108 requires that failure of a turn signal lamp be indicated to the vehicle operator. In many turn signal systems, when a failure occurs, the turn signal indicator light ceases to flash and begins to operate in a steady-burning mode. The question arises as to how many LEDs in a turn signal lamp using LEDs must fail in order for the failure to be indicated to the driver. Certainly, a failure of one or two LEDs out of, say, 40 ought not to create a noticeable decrease in turn signal intensity. However, a level could be reached which could significantly affect the lamp's effectiveness, when 15, 20, or more LEDs cease to function. The agency views this rulemaking as an opportune and appropriate time to solicit comment on this issue, and asks that each person wishing to comment address it specifically.

Finally, there is the possibility of regulating the luminance of the lamp itself, without reference to the number of sections or light sources. Performance standards could be adopted that would assure the lamps would have a maximum and minimum luminance. While such a change might be difficult, with no enhancement of safety, this approach could allow design flexibility that could reduce lamp and vehicle costs. The agency, therefore, is inviting comments on this possibility and how it might be developed and implemented.

In accordance with the discussion above, NHTSA is proposing the addition of a new paragraph S5.1.1.23 to read:

S5.1.1.23 Instead of being designed to conform to photometric requirements based on the number of lighted sections specified in SAE J586 FEB84, SAE J588 NOV84, and SAE J585e September 1977, as applicable, each stop lamp, turn signal lamp, and taillamp that is equipped with light-emitting diodes or other miniature light sources, and that needs more than one light source to achieve compliance with the photometric performance required of a single lighted

section, shall be designed to conform to photometric requirements based on the dimension of the effective projected luminous lens area for the function being tested. A lamp is regarded as having one lighted section if the maximum horizontal or vertical linear dimension of the effective projected luminous lens area of the lamp is less than 150 millimeters (mm), two lighted sections if the dimension is 150–300 mm, and three lighted sections if the dimension is greater than 300 mm.

#### *Effective Projected Luminous Area*

At numerous places in Standard No. 108, there are requirements for the “minimum effective projected luminous area” of signal and marker lamps. This area is defined by the standard as being the area of the projection on a plane perpendicular to the lamp axis of that portion of the light-emitting surface that directs light to the photometric test pattern, and does not include mounting hole bosses, reflex reflector area, beads or rims that may glow or produce small areas of increased intensity as a result of uncontrolled light from small areas ( $\frac{1}{2}$  degree radius around the test point). The rationale for area requirements is to ensure that the lamps’ luminance is not too high, while reducing the light dispersion effect of dirt on the lens. This is especially important for larger vehicles that tend to be cleaned less often.

In the case of lamps which use LEDs or other types of miniature light sources, the individual light sources each produce a narrow beam of light. Because of this, the individual light sources illuminate very distinct areas of the entire lamp lens. For example, looking at a single, circular tail lamp which uses 25 LEDs as its light sources, the narrow beam of each LED creates an appearance of 25 small illuminated circles within the larger circular lens. The area surrounding these 25 illuminated circles appears to not be illuminated. However, based on informal conversations with a lamp manufacturer, on some lamps, if one were to cover the smaller circular areas on the lens where the LED beams are projected on the lens surface, there is a small amount of light that can be detected from the darker regions which are not covered. This small amount of light allows the lamp to comply with the minimum effective projected luminous area requirements, as the total light emitted is from the entire lamp surface.

While lamps using miniature light sources may technically comply with the minimum effective projected luminous area requirements of the standard, the agency is concerned that dirt on the lens could easily negate the light emission from these interstices

such that the lamp becomes markedly smaller in lens area for emitted light. That is, the minuscule amount of light emitted from the areas outside the beams of the light sources may not be enough to be seen in some conditions, such as driving in very bright sunlight or with mildly dirty lenses.

The agency’s concerns are even greater for some combination lamp designs using miniature light sources. In some lamp designs the stop, turn, and taillamp functions are incorporated into one lamp. For some of these lamps, only a fraction of the total number of light sources are illuminated for the taillamp signal. The taillamp function may utilize one-tenth of the miniature light sources that the stop or turn lamp uses. Again, industry testing of these turn signals has shown that there still is a small amount of light emitted from the entire lens surface. But, because of the smaller number of light sources being illuminated for some tail lamps, the likelihood is increased that the critical areas of the lamp could be reduced in output.

The agency would like to have comments on this issue. Specifically, NHTSA wishes to have the view of commenters on whether lamps which use miniature light sources with narrow beams are more likely to have performance degraded than those lamps where the light is more evenly distributed over the lens. NHTSA would like comments on the quantum of light emitted outside the narrow beams of light from the miniature light sources and whether it is sufficient for the lamp to retain some functionality in case it is impaired by road contaminants. In addition, commenters should address how the minimum effective projected luminous area should be measured to account for the narrow beams of LED’s and similar sources, and whether there should be requirements to distribute the light more evenly over the lens surface.

#### *Heat Performance of LEDs*

In the 1994 NPRM, the agency proposed to adopt the text of SAE J1889 which specifies (paragraphs 3.1.5.2 and 3.1.5.3) a temperature condition for testing LED lamps to photometric maxima and minima. For measurements of the maximum photometrics, an unenergized test device is stabilized at the laboratory’s ambient temperature, which is  $23 \pm 5$  degrees Celsius ( $^{\circ}\text{C}$ ). It is then energized. The maximum values within 60 seconds of the initial “on” time are recorded. For measurements of the minimum requirements, an energized device is also stabilized within the same temperature range until either the heat buildup saturation has

occurred, or 30 minutes has elapsed, whichever first occurs. Measurements are then taken of the already-energized lamp. However, this test procedure does not cause LEDs to reach the temperatures they could experience in very hot climates. Because of this, the industry asked the agency to defer rulemaking on this issue so that it could develop a test procedure which represents real world conditions. However, the industry has not moved forward on this issue, and the agency has decided to repropose the procedure.

This procedure provides a simple method for testing the relationship between temperature and light intensity by having the lamps heat themselves. It does not replicate the environment in which lamps on motor vehicles must produce correct signals for the transmission of safety information. In the real world, lamps are heated by the environment, such as use on a hot day in Florida. It is conceivable that lamps could be placed in a heat chamber to simulate the environment and tested photometrically. However, this would not be practicable because of the expense of tests and their lack of repeatability. The SAE test represents a thoughtful and repeatable solution to this simulator. However, developing a practicable test procedure that replicated that environment would be problematic. NHTSA believes that a test procedure which represents real world conditions would be overly burdensome to the industry. Attempting to create such a procedure would require a heat chamber to heat the LEDs to a temperature that represents a very hot climate. If the lamp were to be placed in a heat chamber and heated, the lamp would have to be removed when it reached the desired temperature and mounted in the test device. During this interval, the temperature of the lamp would decrease, thus reducing the accuracy and repeatability of the test. To maintain the heat, the test device would have to be located in a large heat chamber. To create a test apparatus which could heat the LEDs, and also house the photometric equipment, would be very costly, assuming that the equipment would be accurate and reliable at such high temperatures. Also challenging is assuring that an optically correct window can be fitted to the chamber so that the lamp’s beam can be projected to the intensity measuring equipment located outside the test chamber if that equipment cannot be located inside the chamber.

To the agency’s knowledge, the industry has not developed a procedure for testing the effects of temperature on LED lamps that is more representative

than that which is contained in SAE J1889 and that avoids the practical testing problems described above. Therefore, NHTSA is proposing that Standard No. 108 be amended to include the test procedure contained in SAE J1889. Although it does not represent the worst case conditions of the driving environment, it is a standard which was created by the industry to test LEDs' ability to maintain their photometric compliance when heated. As stated previously, it is preferable for the agency to adopt industry standards whenever it is feasible to do so. Additionally, this procedure is presently under consideration for incorporation in European standards in Geneva.

The agency thus proposes to add a new paragraph S5.1.1.24 to read:

S5.1.1.24 Any lamp whose light is provided by light-emitting diodes shall be designed to conform to the photometric requirements appropriate for its type when the lamp is stabilized at  $23\pm5$  degrees C, energized, tested 60 seconds after being energized, and allowed to operate continuously until either the internal heat buildup has stabilized or for 30 minutes, whichever occurs first, and tested again.

#### *Optical Combinations*

Standard No. 108 contains requirements for lamps and lamp functions which are combined optically. Paragraphs S5.4(b) and (c) refer to "combined optically," which is defined in SAE J387, "Terminology—Motor Vehicle Lighting NOV87." This definition states in part that an optical combination is a single or two filament light source or two or more separated light sources that are operated in different ways. NHTSA asks readers for their opinion whether this definition includes LEDs. Because LEDs do not have filaments, they are not "filament light sources" within the meaning of the first part of the definition. However, they could be "two or more separated light sources operated in different ways" within the meaning of the second part of the definition. LEDs are sometimes operated at different duty cycles depending on the photometric needs of the lamp. For example, because the lamps need to be brighter for the stop lamp function, the duty cycle would have to be higher than for the taillamp function. NHTSA asks whether this would constitute the LEDs being "two or more separated light sources that are operated in different ways" or is it really a single light source operated in different ways? If each LED is operated in two or more ways, the definition of "combined optically" may not be adequate and in need of change

to accommodate light sources such as LEDs that alone can operate in different ways just by changing the nature of the electric signal supplied to them, e.g. different duty cycles, a polarity reversal, or alternating current. In this event, NHTSA will adopt a revision of the SAE definition and include it in the text of Standard No. 108.

#### *Effective Date*

The agency is proposing that S5.1.1.23 and S5.1.1.24 become effective one year after issuance of the final rule. However, it does not know whether there are existing lamps using LEDs and other miniature light sources which would require redesign in order to comply. Therefore, based upon the comments, an effective date of later than one year is a possibility. Nor does NHTSA know whether there are manufacturers who wish to comply with the proposed amendments in advance of their effective date. Accordingly, based upon the comments, optional compliance with the amendments in advance of their effective date is also a possibility.

#### *Request for Comments*

Interested persons are invited to submit comments on the proposal. It is requested but not required that 10 copies be submitted.

All comments must not exceed 15 pages in length (49 CFR 553.21). Necessary attachments may be appended to these submissions without regard to the 15-page limit. This limitation is intended to encourage commenters to detail their primary arguments in a concise fashion.

If a commenter wishes to submit certain information under a claim of confidentiality, three copies of the complete submission, including purportedly confidential business information, should be submitted to the Chief Counsel, NHTSA, at the street address given above, and seven copies from which the purportedly confidential information has been deleted should be submitted to the Docket Section. A request for confidentiality should be accompanied by a cover letter setting forth the information specified in the agency's confidential business information regulation, 49 CFR part 512.

All comments received before the close of business on the comment closing date indicated above for the proposal will be considered, and will be available for examination in the docket at the above address both before and after that date. To the extent possible, comments filed after the closing date will also be considered. Comments received too later for consideration in

regard to the final rule will be considered as suggestions for further rulemaking action. Comments on the proposal will be available to inspection in the docket. NHTSA will continue to file relevant information as it becomes available in the docket after the closing date and it is recommended that interested persons continue to examine the docket for new material.

Those persons desiring to be notified upon receipt of their comments in the rules docket should enclose a self-addressed stamped postcard in the envelope with their comments. Upon receiving the comments, the docket supervisor will return the postcard by mail.

#### *Rulemaking Analyses*

##### *Executive Order 12866 and DOT Regulatory Policies and Procedures*

NHTSA has considered the impact of this rulemaking action under Executive Order 12866 and the Department of Transportation's regulatory policies and procedures. This rulemaking document was not reviewed by the Office of Management and Budget under E.O. 12866, "Regulatory Planning and Review." It has been determined that the rulemaking action is not significant under Department of Transportation regulatory policies and procedures. The effect of the rulemaking action would be to adopt terminology more suitable to new technologies. It might require minimal redesign of stop lamps, turn signal lamps, and taillamps on vehicles in order to substitute LEDs and other miniature light sources. However, impacts of the cost of the proposed rule are expected to be so minimal as not to warrant preparation of a full regulatory evaluation.

##### *Regulatory Flexibility Act*

The agency has also considered the effects of this rulemaking action in relation to the Regulatory Flexibility Act (5 U.S.C. Sec. 601 *et seq.*). I certify that this rulemaking action would not have a significant economic effect upon a substantial number of small entities.

The following is NHTSA's statement providing the factual basis for the certification (5 U.S.C. Sec. 605(b)). The proposed amendment would primarily affect motor vehicle and lighting equipment manufacturers. Under 15 U.S.C. Chapter 14A "Aid to Small Businesses," a small business concern is "one which is independently owned and operated and which is not dominant in its field of operation" (15 U.S.C. Sec. 632). Manufacturers of motor vehicles and lighting equipment are generally dominant in their fields of

operations and are not small businesses within the meaning of the Regulatory Flexibility Act. Further, small organizations and governmental jurisdictions would not be significantly affected by the proposed rule as the price of new motor vehicles should not be impacted. Accordingly, no Regulatory Flexibility Analysis has been prepared.

#### *Executive Order 12612 (Federalism)*

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612 on "Federalism." It has been determined that the rulemaking action does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

#### *National Environmental Policy Act*

NHTSA has analyzed this rulemaking action for purposes of the National Environmental Policy Act. The rulemaking action would not have a significant effect upon the environment as it does not affect the present method of manufacturing motor vehicle lighting equipment.

#### *Civil Justice Reform*

This rule would not have any retroactive effect. Under 49 U.S.C. 30103(b), whenever a Federal motor vehicle safety standard is in effect, a state may not adopt or maintain a safety standard applicable to the same aspect of performance which is not identical to the Federal standard. Section 30161 sets forth a procedure for judicial review of final rules establishing, amending, or revoking Federal motor vehicle safety standards. That section does not require submission of a petition for reconsideration or other administrative proceedings before parties may file suit in court.

#### **List of Subjects in 49 CFR Part 571**

Imports, Motor vehicle safety, Motor vehicles.

#### **PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS**

In consideration of the foregoing, it is proposed that 49 CFR Part 571 be amended as follows:

1. The authority section would continue to read as follows:

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

#### **§ 571.108 [Amended]**

2. Section 571.108 would be amended by adding paragraphs S5.1.1.23 and S5.1.1.24 to read as follows:

#### **§ 571.108 Standard No. 108; Lamps, reflective devices, and associated equipment.**

\* \* \* \* \*

S5.1.1.23 Instead of being designed to conform to photometric requirements based on the number of lighted sections specified in SAE J586 FEB84, SAE J588 NOV84, and SAE J585e September 1977, as applicable, each stop lamp, turn signal lamp, and taillamp that is equipped with light-emitting diodes or other miniature light sources, and that needs more than one light source to achieve compliance with the photometric performance required of a single lighted section, shall be designed to conform to photometric requirements based on the dimension of the effective projected luminous lens area for the function being tested. A lamp is regarded as having one lighted section if the maximum horizontal or vertical linear dimension of the effective projected luminous lens area of the lamp is less than 150 millimeters (mm), two lighted sections if the dimension is 150–300 mm, and three lighted sections if the dimension is greater than 300 mm.

S5.1.1.24 Any lamp whose light is provided by light-emitting diodes shall be designed to conform to the photometric requirements appropriate for its type when the lamp is stabilized at 23±5 degrees C, energized, tested 60 seconds after being energized, and allowed to operate continuously until either the internal heat buildup has stabilized or for 30 minutes, whichever occurs first, and tested again.

\* \* \* \* \*

Issued: June 18, 1998.

**L. Robert Shelton,**

*Associate Administrator for Safety Performance Standards.*

[FR Doc. 98–16808 Filed 6–23–98; 8:45 am]

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#### **DEPARTMENT OF COMMERCE**

#### **National Oceanic and Atmospheric Administration**

#### **50 CFR Part 300**

**[Docket No. 980611156–8156–01; I.D. 060898A]**

#### **Pacific Halibut Fisheries; Control Date for the Halibut Charterboat Fishery**

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

**ACTION:** Advance notice of proposed rulemaking; notice of control date for the halibut charterboat fishery.

**SUMMARY:** NMFS announces that anyone entering the halibut charterboat fishery in convention waters off Alaska after June 24, 1998 will not be assured of future access to that fishery if a management regime that limits the number of participants is developed and implemented under the authority of the Northern Pacific Halibut Act of 1982 (Halibut Act). For purposes of this notice, a person in the halibut charterboat fishery means the owner or operator of a vessel that carries passengers for hire to engage in recreational fishing for Pacific halibut (*Hippoglossus stenolepis*) in convention waters off Alaska. This notice is intended to promote awareness of potential eligibility criteria for future access to the halibut charterboat fishery in convention waters off Alaska and to discourage new entrants into this fishery based on economic speculation while the North Pacific Fishery Management Council (Council) contemplates whether and how access to the halibut charterboat fishery in convention waters off Alaska should be controlled. The potential eligibility criteria may be based on historical participation. Therefore, current participants in the halibut charterboat fishery in convention waters off Alaska should locate and preserve records that substantiate and verify their participation in that fishery.

**DATES:** Comments must be received by July 24, 1998.

**ADDRESSES:** Comments should be addressed to Susan J. Salvesson, Assistant Administrator for Sustainable Fisheries, Sustainable Fisheries Division, Alaska Region, NMFS, 709 West 9th Street, Room 453, Juneau, AK 99801, or P.O. Box 21668, Juneau, AK 99802, Attention: Lori J. Gravel.

**FOR FURTHER INFORMATION CONTACT:** John Lepore, 907–586–7228.

#### **SUPPLEMENTARY INFORMATION:**

Section 5 of the Halibut Act (16 U.S.C. 773c(c)) provides that the Regional Fishery Management Council having authority for the geographical area concerned may develop regulations governing Pacific halibut catch in U.S. Convention waters, including limited access regulations, that are in addition to, but not in conflict with, regulations of the International Pacific Halibut Commission (IPHC). The IPHC is the body authorized by the Convention between the United States and Canada for the Preservation of the Halibut Fishery of the North Pacific Ocean and the Bering Sea (Convention) to promulgate regulations for the conservation and management of the Pacific halibut fishery. Section 5 of the