

DEPARTMENT OF TRANSPORTATION**Federal Railroad Administration****49 CFR Part 229**

[Docket No. FRA-2003-14217; Notice No. 2]

RIN 2130-AB58

Railroad Locomotive Safety Standards: Clarifying Amendments; Headlights and Auxiliary Lights

AGENCY: Federal Railroad Administration (FRA), DOT.

ACTION: Final rule.

SUMMARY: On August 19, 2003, FRA published an interim final rule making a technical clarification to the locomotive headlight and auxiliary light provisions contained in § 229.125(a) and (d) of title 49 of the Code of Federal Regulations (CFR). The purpose of the modification was to codify FRA's longstanding acceptance of lamps used in locomotive headlights and auxiliary lights. FRA believes that the clarification is consistent with both FRA's intent when issuing the requirements related to locomotive headlights and auxiliary lights and FRA's enforcement policies related to those provisions. FRA also believes that the clarification furthers FRA's goal of facilitating the use of advanced technologies and enhances FRA's safety enforcement program by recognizing specific types of lamps it considers acceptable for use in headlights and auxiliary lights. This final rule retains the technical clarifications made in the interim final rule with minor changes for consistency and clarity.

DATES: This final rule is effective March 16, 2004.

ADDRESSES: *Petitions:* Any petitions for reconsideration related to Docket No. FRA-2003-14217, may be submitted by any of the following methods:

- *Web Site:* <http://dms.dot.gov>. Follow the instructions for submitting comments on the DOT electronic docket site.
- *Fax:* 1-202-493-2251.
- *Mail:* Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-001.

• *Hand Delivery:* Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC between 9 a.m. and 5 p.m. Monday through Friday, except Federal Holidays.

• *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the

online instructions for submitting comments.

Instructions: All submissions must include the agency name and docket number or Regulatory Identification Number (RIN) for this rulemaking. Note that all petitions for reconsideration will be posted without change to <http://dms.dot.gov> including any personal information. Please see the "General Information" heading in the **SUPPLEMENTARY INFORMATION** section of this document for Privacy Act information related to any submitted petition, comment, or material.

Docket: For access to the docket to read background documents, comments, or petitions for reconsideration received, go to <http://dms.dot.gov> at any time or to PL-401 on the plaza level of the Nassif Building, 400 Seventh Street SW., Washington, DC between 9 a.m. and 5 p.m. Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Charles L. Bielitz, Mechanical Engineer, FRA Office of Safety, RRS-14, 1120 Vermont Avenue NW., Stop 25, Washington, DC 20590 (telephone: 202-493-6314), or Thomas J. Herrmann, Trial Attorney, Office of Chief Counsel, FRA, 1120 Vermont Avenue, NW., Stop 10, Washington, DC 20590 (telephone: 202-493-6036).

SUPPLEMENTARY INFORMATION:**Background**

On August 19, 2003, FRA published an interim final rule making a technical clarification to the locomotive headlight and auxiliary light provisions contained in 49 CFR 229.125(a) and (d). See 68 FR 49713 ("Interim Final Rule"). In this Interim Final Rule, FRA stated its belief that, based on new technologies and designs related to the lamps utilized in road locomotive headlights and auxiliary lights over the last decade, the Federal regulations governing these components needed to be modified both to remain consistent with FRA's intent when it originally issued those provisions and to incorporate FRA's enforcement policies developed over the intervening years. Currently, there are two primary types of lamps utilized in locomotive headlight and auxiliary light fixtures: a Parabolic Allumination Reflection (PAR)-56, 200-watt, 30-volt lamp (200-watt lamp) and a PAR-56, 350-watt, 75-volt lamp (350-watt lamp).

Prior to the mid-1990s, the primary lamp used in road locomotive headlights throughout the industry was the 200-watt lamp, which produces a mean luminous intensity that is well in excess of 200,000 candela at the center of its beam, with all production samples

having a minimum luminous intensity of 200,000 candela. In the early to mid-1990s, with the advent of locomotive auxiliary lights, the railroad industry began using the 350-watt lamp in both headlight and auxiliary light fixtures. Controlled testing of auxiliary lights performed for FRA by the Volpe National Transportation Systems Center (Volpe) in 1995 used regular production 350-watt lamps. A single 350-watt lamp tested by the U.S. Coast Guard for the Volpe test, as well as data supplied by the lamp vendor, showed a center beam luminous intensity well in excess of 250,000 candela, but it has since been determined that these data were not representative of typical lamp production. At present, most new locomotives are equipped with the 350-watt lamps in both the headlight and auxiliary light fixture. Due to normal variations in production processes, the vast majority of 350-watt lamps produced since 1994 do not produce 200,000 candela. The current production (2001 through mid-2003) of 350-watt lamps is centered at approximately 160,000 candela.

Although most 350-watt lamps do not meet the 200,000 candela requirements related to headlights and auxiliary lights contained in 49 CFR 229.125(a) and (d) before their revision through the Interim Final Rule, FRA has accepted and will continue to accept the use of 350-watt lamps in both headlight and auxiliary light fixtures for the reasons discussed below. In this preamble, reference to a section or numbered part is to a section or numbered part in title 49 of the CFR. In order to clarify FRA's continued acceptance of the use of these lamps and to incorporate existing enforcement guidance, FRA issued the Interim Final Rule amending the regulatory provisions contained in part 229 to specifically address the use of these types of lamps in both headlight and auxiliary light locations. This final rule retains the amendments made in that Interim Final Rule with minor changes for consistency and clarity.

Discussion of Comments

In response to the Interim Final Rule, FRA received comments from three organizations: the Brotherhood Railway Carmen Division of the Transportation Communications International Union (BRC), the Association of American Railroads (AAR), and the Long Island Rail Road (LIRR). The concerns raised by the AAR and the LIRR were similar in that they both sought additional relief from the requirements related to the handling of a locomotive that experiences the failure of one lamp in a dual 350-watt lamp headlight. The

concerns raised by the BRC related to the process by which FRA issued the clarifying amendments contained in the Interim Final Rule and retained in this final rule. The BRC expressed concern over FRA's publication of the clarifying amendments in an immediately effective interim final rule. Although the BRC does not object to either the substance or the issuance of the Interim Final Rule in this instance, the organization did want to ensure that FRA was not utilizing immediately effective interim final rules to make substantive changes to existing regulations. It appears that the BRC's primary concern is that FRA not abuse the procedure utilized in this proceeding.

As the modifications contained in the Interim Final Rule and retained in this final rule were intended merely to clarify FRA's intent when issuing the final rule related to auxiliary lights and incorporate existing FRA enforcement policies related to locomotive headlights and auxiliary lights, FRA initially issued the technical clarifications as an Interim Final Rule with a request for comments. The Interim Final Rule made clear that the clarifications were intended to reinforce FRA's continued acceptance of locomotive lamps which have been used throughout the industry for nearly a decade. See 68 FR 49713–16. Because FRA viewed the amendments as technical clarifications of the existing regulations, FRA believes that good cause existed for finding that prior public notice of the action was both impracticable and unnecessary. See 5 U.S.C. 553(b)(3)(B).

With this said, FRA wishes to make clear that the issuance of an immediately effective interim final rule is a very rare procedural action used by the agency. FRA believes that due to the historical development and enforcement of the provisions involved that it was necessary to issue an immediately effective interim final rule to ensure continued, consistent, and unambiguous enforcement of the headlight and auxiliary light provisions contained in the regulations. FRA fully agrees with the BRC that substantive rule changes should not be made through such a regulatory vehicle and that such an action would violate the Administrative Procedure Act. FRA welcomes the BRC's continued vigilance of its regulatory activities and appreciates the organization's participation and input in all areas of its enforcement program to ensure the safety of the nation's railroads.

The comments of both the AAR and the LIRR seek additional latitude with regard to the handling of a locomotive

that utilizes two PAR-56, 350-watt, 75-volt (350-watt) lamps to achieve the 200,000 candela headlight requirement when one of the two lamps becomes inoperative. The AAR seeks to have the provisions related to movement of locomotives with defective auxiliary lights contained at § 229.125(g) applied to locomotives that experience the failure of one or more of the 350-watt lamps utilized in a locomotive's headlight. Similarly, the LIRR seeks to have the regulation amended to permit a locomotive with one inoperative 350-watt lamp in the headlight, found during or after the performance a calendar-day inspection, to continue in revenue service until the next calendar-day inspection. Both these commenters base their requests on the fact that one operative 350-watt lamp is still available in the headlight and that the auxiliary lights mounted on the locomotive will provide additional illumination in front of the locomotive and would not compromise safety.

The Interim Final Rule made clear that FRA will consider a locomotive with a dual-lamp headlight fixture that is equipped with two PAR-56, 350-watt, 75-volt lamps to meet the 200,000-candela requirement contained in § 229.125(a), provided both lamps are operative. The preamble to the Interim Final Rule further stated that if either lamp in such a configuration became inoperative, the locomotive was to be handled in accordance with the movement-for-repair provisions contained in § 229.9. See 68 FR 49714. Under the provisions of § 229.9, such a locomotive may continue to use its propelling motors only if it is properly tagged and only until the earlier of either the next calendar day inspection or the arrival of the locomotive at the nearest forward point where the repairs necessary to bring it into compliance can be made. See 49 CFR 229.9(b).

The purpose of the technical amendments made to the locomotive headlight requirements in the Interim Final Rule was to clarify the alternative methods by which the existing 200,000 candela requirement could be achieved based on the design of locomotive headlight fixtures and the type of lamps used in those fixtures. Because the purpose of the clarifying amendments was to merely incorporate longstanding enforcement policies related to locomotive headlights into the regulation, FRA proceeded directly to an interim final rule with a request for comments. In FRA's opinion, the additional latitude sought by the AAR and LIRR regarding the handling of a locomotive with a headlight fixture not capable of producing 200,000 candela

would constitute a substantive change to the existing regulation. With the concerns of the BRC in mind, FRA believes that to make such a substantive change in a rulemaking proceeding, intended to be a technical clarification of the existing regulation, would clearly violate the Administrative Procedure Act. Thus, although there may be some merit to the requests made by the AAR and the LIRR, FRA does not believe this rulemaking is the proper forum in which to address the issues. While their comments may have merit when considering locomotives with auxiliary lights aimed parallel to the centerline of the locomotive and burning steadily, Part 229 permits auxiliary lights to be aimed up to 15 degrees of the centerline and permits auxiliary lights to flash. See 49 CFR 229.125(d)(3) and (e)(1). Further, auxiliary lights may be extinguished or dimmed when trains are passing and under certain other conditions. See 49 CFR 229.125(f). FRA believes that changes in these provisions would be beyond the scope of this rulemaking proceeding. The relief sought by AAR and LIRR also raises a number of technical and operational issues that would need to be fully explored and evaluated before any action could be considered by FRA. Consequently, FRA is denying the requests made by AAR and LIRR in their comments to this proceeding. AAR and LIRR can of course file a petition under 49 C.F.R. part 211 seeking an FRA rulemaking to address the additional latitude they favor.

In addition to the specific relief sought by AAR and LIRR, both parties' comments contain information and suggestions for FRA. LIRR's comments note that qualification testing of a 350-watt lamp conducted in late-2001 indicated that the lamp could successfully illuminate a person at 800 feet. The results of this testing were not included with the comments, and FRA is not aware of these tests. A similar test that was reviewed by FRA produced inconclusive results, at best. Moreover, the old performance standard from which the existing 200,000-candela requirement is derived required the headlight to illuminate a *dark object* the size of a man at least 800 feet in front of the light. See 44 FR 29618 and 45 FR 21109. At this time FRA is not aware of any testing which definitively establishes that the typical 350-watt lamp is capable of meeting that old performance standard or the existing 200,000-candela requirement.

AAR's comments also urge FRA to convene a group of technical experts to develop a permanent illumination standard for headlights and auxiliary

lights that is based on sound scientific analysis. AAR notes that there was little scientific analysis conducted when the 200,000-candela requirement was adopted in 1980 and stresses that the intensity requirement was established prior to the requirements related to auxiliary lights which add to the illumination provided by a locomotive's headlight. AAR states that it is eager to participate in such a review. FRA agrees that such an endeavor may be useful. FRA welcomes any additional details, information, suggestions, and views related to such a review from AAR and any other interested party. FRA also notes that AAR enjoys custody and control of the Transportation Technology Center, where controlled tests could be readily accomplished.

Section Analysis

A. Headlights: § 229.125(a).

The regulatory provisions related to locomotive headlights are contained at § 229.125(a) through (c). These requirements were included in the regulations when part 229 was added to the Code of Federal Regulations in 1980. See 45 FR 21109 (March 31, 1980). Part 229 was added in order to modernize the federal regulations previously contained in part 230 related to all types of locomotives by separating and amending the requirements related to diesel and electric locomotives from those related to steam locomotives. The provisions contained in § 229.125(a)–(c) were intended to be a modified and condensed version of the requirements previously contained in § 230.231 prior to 1980. See 44 FR 29618 (May 21, 1979).

In the 1979 Notice of Proposed Rulemaking (NPRM) and the 1980 final rule, FRA explained that the approach contained in § 230.231 for determining intensity was imprecise and unscientific. Section 230.231 used a vague performance standard to describe the intensity, which read as follows:

a headlight which shall afford sufficient illumination to enable a person in the cab of such locomotive who possesses the usual visual capacity required of locomotive enginemen, to see in a clear atmosphere, a dark object as large as a man of average size standing erect at a distance of at least 800 feet ahead and in front of such headlight. * * *

See § 230.231 in pre-1980 CFR. In order to make this vague performance standard more precise and scientific, FRA specified that a locomotive headlight must produce a luminous intensity of at least 200,000 candela. See 44 FR 29618 and 45 FR 21109. In the preamble to the final rule, FRA stated that the more scientific 200,000-candela

minimum standard could be met by the headlights used in the existing locomotive fleet and that the use of the more modern standard should not be viewed as a change in FRA's enforcement approach. *Id.* At the time the final rule was issued, virtually all locomotive headlights were equipped with the 200-watt lamps which are capable of producing in excess of 200,000 candela. Thus, FRA was merely attempting to describe, in scientific terms, the type of lamps being used by the industry in locomotive headlight fixtures at that time.

Subsequent to the issuance of the final rule, FRA developed informal enforcement guidance for its field inspectors related to when a locomotive's headlight should be considered inoperative. The guidance was eventually included in FRA's Motive Power and Equipment (MP&E) Enforcement Manual distributed in July of 1992. See MP&E Enforcement Manual at 8–79. This guidance instructed FRA inspectors to consider a locomotive's headlight to be operative when the locomotive is equipped with a sealed two-beam (two-lamp) headlight fixture and only one of the lamps is illuminated. The rationale for this guidance was based on the fact that virtually all locomotives were equipped with a dual-lamp headlight fixture and prior to the early 1990s the lamps used in these fixtures were the 200-watt lamps, each independently capable of producing at least 200,000 candela. Because the regulation only requires the headlight to produce 200,000 candela, FRA determined that it would not consider a dual-lamp headlight inoperative if it is equipped with at least one operative lamp capable of producing 200,000 candela. *Id.*

As noted above, in the early to mid-1990s, the industry began widespread use of the 350-watt lamps in both headlight and auxiliary light fixtures. The vast majority of 350-watt lamps produced since 1994 do not produce 200,000 candela. The current production of the 350-watt lamps is centered at approximately 160,000 candela. Furthermore, data provided to FRA do not definitively establish that an individual 350-watt lamp meets the underlying performance standard, discussed above, on which the 200,000-candela requirement was based. Moreover, FRA is not comfortable applying an old and somewhat subjective performance standard in place of the more precise and scientific standard that was adopted several decades ago. Therefore, because most 350-watt lamps do not individually produce the luminous intensity

specified in the existing regulation, FRA believed it was necessary to clarify its existing enforcement guidance and specifically modify the regulation to reflect its position regarding the use of 350-watt lamps in locomotive headlight fixtures.

In the Interim Final Rule, consistent with FRA's existing enforcement guidance related to the headlight provisions contained in § 229.125(a), FRA asserted that it would continue to interpret the term "headlight," as used in this provision, to mean the entire headlight fixture whether it is comprised of either one or more lamps. Thus, the requirement contained in this provision to produce 200,000 candela is to be determined by the luminous intensity of the entire headlight fixture. Although a single 350-watt lamp, as described above, generally does not produce 200,000 candela, data clearly establish that the beams of two 350-watt lamps in a dual-lamp headlight easily produce well in excess of 200,000 candela once the two beams overlap sufficiently, which occurs within a few feet in front of the fixture.

In view of the above, the Interim Final Rule made clear that FRA will consider a locomotive with a dual-lamp headlight fixture that is equipped with two PAR-56, 350-watt, 75-volt lamps to meet the 200,000-candela requirement contained in § 229.125(a), provided both lamps are operative. If either lamp in such a configuration becomes inoperative, the locomotive is to be handled in accordance with the movement-for-repair provisions contained in § 229.9. Similarly, the Interim Final Rule made clear that FRA will continue to consider a headlight fixture equipped with a single operative PAR-56, 200-watt, 30-volt lamp to meet the intensity requirement of § 229.125(a) because such a lamp is capable of individually producing 200,000 candela. This final rule retains the amendments made in the Interim Final Rule to the regulatory language contained in § 229.125(a) to specifically include the interpretations and clarifications discussed above. It should be noted that FRA expects railroads to have some method or procedure in place which notifies the operating crew and mechanical employees of the type of lamps being utilized in the locomotive headlight fixture in order that the locomotive can be properly handled for repairs, if necessary.

B. Auxiliary Lights: § 229.125(d)(2)

The regulatory provisions related to locomotive auxiliary lights are found at § 229.125(d) through (h) and § 229.133. These requirements were added to the

regulations between 1993 and 1996 and were established through a rulemaking that began with a 1993 interim final rule, containing interim provisions related to auxiliary lights, and then proceeded to a 1995 NPRM proposing many of the auxiliary light provisions that were ultimately issued in the 1996 final rule. See 58 FR 6899 (February 3, 1993), 60 FR 44457 (August 28, 1995), and 61 FR 8881 (March 6, 1996). At this time, the provisions relating to auxiliary lights contained in § 229.133 are for the most part superseded by similar provisions contained at § 229.125, except to the extent that certain types of auxiliary lights were “super-grandfathered” as meeting the requirements of § 229.125. See 61 FR 8885–86 and § 229.133(c). Although these documents require that each prescribed auxiliary light produce 200,000 candela, none of them directly discusses FRA’s rationale for including the specified luminous intensity. It can be assumed that the 200,000-candela requirement was based on the headlight provision discussed above. Moreover, at the time the auxiliary light provisions were added to the regulations, both the 200-watt and 350-watt lamps were believed to be capable of producing 200,000 candela. Consequently, when FRA incorporated the 200,000-candela requirement into the auxiliary light provisions, it is clear that FRA was merely attempting to describe the locomotive lamps being used by the industry at that time.

As part of the auxiliary light rulemaking, FRA’s Office of Research and Development, through Volpe, studied the impact of auxiliary lights as alerting devices to improve locomotive conspicuity. The final report on this study was issued in July of 1995 under Report Number DOT/FRA/ORD-95-13 (Volpe Report). The report is part of FRA Docket No. RSGC-2 and is available online at: <http://www.fra.dot.gov/rdv30/reports/index.htm>. As part of this study, FRA evaluated various lighting systems. Four alerting light systems were evaluated for compliance with FRA’s interim advisory standards, for costs, and for reliability. Field tests were also conducted on these lighting systems to determine their ability to increase an approaching train’s visibility. These four alerting light systems included: standard locomotive headlights, crossing, ditch, and strobe lights. FRA utilized the data developed in this study as the basis for the auxiliary light provisions currently contained in § 229.125(d) through (h). See 60 FR 44457; and 61 FR 8881.

Based on FRA’s review of the Volpe Report and its supporting data and in

light of data subsequently provided by General Electric Company (GE), FRA believes that use of either a 350-watt lamp or a 200-watt lamp in locomotive auxiliary lights meets FRA’s intent when issuing the regulations pertaining to such fixtures. A review of the Volpe Report establishes that the lamps tested in the headlight, ditch light, and crossing light systems were all PAR-56, 350-watt, 75-volt lamps. See Volpe Report at Appendix D-4.

Although the report notes that two 350-watt lamps sampled for luminous intensity produced peak intensity reading in excess of 200,000 candela, there is no indication in the report that those specific lamps were ever used in any of the subsequent testing. One of these measurements was on an isocandela plot supplied to Volpe by Quest Corporation, the lamp vendor, based on data supplied by GE, the lamp manufacturer, and the second was from a test conducted by the U.S. Coast Guard for Volpe. See Volpe Report at Table 4-5 and Appendix C. Based on information recently provided by GE, FRA believes that the intensity readings on these two lamps were an anomaly in terms of peak intensity for 350-watt lamps. The data supplied by GE show that only one of 93 samples of the 350-watt lamp tested from 1994 to the present produced a maximum beam candle power above 250,000 candela. This fact leads FRA to suspect that the lamp for which data was supplied by Quest Corporation and the lamp that was tested by the Coast Guard in relation to the Volpe Report may have been the same lamp, which was not representative of the lamps actually used in the Volpe tests. In fact, the lamps used in the Volpe field tests (which validated the benefits of using auxiliary lights) were 350-watt lamps. A large proportion of the lamps used in the tests in all probability did not meet the luminous intensity requirement because they were from normal production runs which included a high proportion of lamps with a peak luminous intensity below the minimum 200,000 candela.

In addition to the fact that the 350-watt lamp was used in the Volpe tests, FRA also believes that the 350-watt lamp currently being used in the industry provides equal, if not greater, benefits when used in auxiliary light fixtures than a 200-watt lamp capable of producing 200,000 candela. The primary purpose of locomotive auxiliary lights is to enhance the visibility of the front-end locomotive of a train from the perspective of a driver of a motor vehicle approaching a grade crossing. See 61 FR 8881. With this purpose in

mind, FRA believes that, due to the design of 350-watt lamps, they provide equal, if not greater, visibility to motorists approaching grade crossings. Although FRA used peak candela to describe the type of lamps to be used in auxiliary light fixtures, FRA believes that a more appropriate measure is the intensity of the light at an angle from the head of the locomotive. The Volpe Report indicates that the point of first detection of a train’s auxiliary lights for a motorist approaching a grade crossing (205 feet from centerline of the tracks) occurred at approximately 1,550 feet, a point that is 7.5 degrees from the centerline of the locomotive. See Volpe Report at Section 5. The Volpe Report also indicates that the point at which the separation of the lamps in the headlight and auxiliary lights became detectable to an approaching motorist was at a distance of approximately 570 feet, a point that is 20 degrees from the centerline of the locomotive. *Id.* Based on this information, it is evident that the key intensity figure for an auxiliary light is the intensity of the light at angles of between 7.5 degrees and 20 degrees from the centerline of the locomotive.

Although a 350-watt lamp does not generally produce a maximum beam candle power (MBCP) in excess of 200,000 candela, these lamps do produce a greater luminous intensity over a broader angle off the beam centerline than the traditional 200-watt lamp capable of producing a MBCP in excess of 200,000 candela. In fact, the available data clearly establish that the currently produced 350-watt lamp has a higher light intensity at any angle greater than 3.5 degrees off the centerline when compared to the more traditional 200-watt lamp used on older locomotives. Thus, the 350-watt lamps are particularly well suited for use in auxiliary light locations, which are primarily intended to be seen by motorists well away from an approaching grade crossing. Consequently, FRA believes that available data support a determination that the 350-watt lamp currently being produced and which has been permitted to be used in most newer locomotive auxiliary light fixtures since the mid-1990s, actually enhances the ability of a motorist to detect an oncoming train.

In addition to the supporting data, FRA also notes that it has accepted the use of both 200-watt and 350-watt lamps since they began being used in auxiliary light fixtures beginning in the early to mid-1990s. It should also be noted that grade crossing accidents, deaths, and injuries have dropped sharply since the introduction of the 350-watt auxiliary lights in the mid-1990s. Furthermore,

FRA is not aware of any complaints by operating crews or any deficiencies being noted by its field inspectors related to the luminous intensity produced by the 350-watt lamps since they began being used in locomotives. Moreover, FRA is not aware of any private litigation where the intensity of the light produced by a locomotive's auxiliary lights was brought into question.

In order to reflect FRA's intent when issuing the regulations related to auxiliary lights and to incorporate FRA's existing enforcement posture with regard to the use of 350-watt lamps, the Interim Final Rule amended the regulatory provisions relating to the auxiliary light provisions contained at § 229.125(d)(2) to specifically permit the continued use of 350-watt lamps. FRA received no specific substantive objections to the clarifying amendments made in the Interim Final Rule. Therefore, this final rule retains the clarifying amendments made in the Interim Final Rule with minor changes for consistency and clarity. FRA continues to believe this modification is necessary to ensure that there is no misunderstanding by either the regulated community or its field inspectors with regard to FRA's position. The modification makes clear that FRA will accept the use of either a lamp capable of producing at least 200,000 candela (a PAR-56, 200-watt, 30-volt lamp) or a lamp capable of producing a minimum of 3,000 candela at 7.5 degrees and a minimum of 400 candela at 20 degrees from the centerline of the locomotive when the lamp is aimed parallel to the tracks (either a PAR-56, 200-watt, 30-volt lamp or a PAR-56, 350-watt, 75-volt lamp). The light intensities specified in the Interim Final Rule and retained in this final rule are based on the luminous intensity produced at those angles by a PAR-56, 200-watt, 30-volt lamp (according to data supplied by GE) when such a lamp is aimed parallel to the tracks. FRA continues to believe this is the most appropriate measure because the agency has interpreted the regulations as permitting this light intensity since their inception. Thus, acceptance of a lamp that produces an equivalent or greater intensity at these critical angles is consistent with the intent and purpose of the auxiliary light provisions when originally prescribed and is consistent with FRA's goal of promoting and facilitating new technologies. In furtherance of this goal, FRA also notes that, although the modification made to the regulation by the Interim Final Rule and retained in

this final rule identifies specific lamps as meeting the specified criteria, the modification also acknowledges that lamps of equivalent design and capable of producing equivalent light intensities would be considered acceptable by FRA.

Related Provisions

Although there are provisions contained in §§ 229.133 and 238.443 that reference the use of lamps producing at least 200,000 candela, FRA does not intend to change any of the language contained in those provisions at this time. Section 229.133 contains interim locomotive conspicuity measures that were incorporated into the regulations in 1993 while the final provisions related to locomotive auxiliary lights were being developed. See 58 FR 6899; 60 FR 44457; and 61 FR 8881. Although locomotives equipped with one of the specified interim conspicuity measures were "grandfathered" or exempted from the subsequent auxiliary light provisions included in § 229.125, that grandfathering expired on March 6, 2000. See 61 FR 8885 and § 229.125(d). When issuing the final rule related to locomotive auxiliary lights in 1996, FRA did "super-grandfather" certain locomotives if equipped with some of the auxiliary conspicuity measures specified in § 229.133, which included: oscillating lights; strobe lights; and auxiliary lights if spaced at least 44 inches apart. See 61 FR 8885 and § 229.133(c). Of the three types of measures "super-grandfathered," only the provision related to oscillating lights specifies the use of a lamp capable of producing at least 200,000 candela. See § 229.133(c)(1) through (c)(3). As there are very few locomotives currently being operated that are equipped with oscillating lights and because FRA has no data related to the impact of utilizing 350-watt lamps in single-lamp oscillating light fixtures, FRA is not in a position to accept the use of such lamps in these devices at this time. However, FRA will continue to accept the use of 350-watt lamps in those circumstances where an oscillating light is used in conjunction with the auxiliary lights described in § 229.125, and in circumstances where an oscillating light under § 229.133(b)(4)(i)(A) consists of a dual-lamp fixture equipped with two operative 350-watt lamps.

The requirements related to Tier II passenger equipment also contain a requirement that Tier II power cars be equipped with headlights that produce at least 200,000 candela. See § 238.443. However, contrary to the headlight

provisions in part 229, which require that a locomotive be equipped with at least one headlight, the provision in § 238.443 requires each Tier II power car to be equipped with at least two headlights and that each headlight produce no less than 200,000 candela. *Id.* Moreover, the present design of the headlights on Tier II power cars utilizes a single lamp in each of the two required headlight fixtures. Thus, the preceding discussion related to FRA's acceptance of the use of 350-watt lamps in traditional locomotives covered under the provisions of § 229.125(a), is not applicable to the headlights on Tier II power cars, which are separately addressed in part 238.

General Information

FRA wishes to inform all potential commenters that anyone is able to search the electronic form of all comments received into any agency docket 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://dms.dot.gov>.

Regulatory Impact

Executive Order 12866 and DOT Regulatory Policies and Procedures

This final rule has been evaluated in accordance with Executive Order 12866 and DOT policies and procedures. The modifications retained in this final rule are not considered significant because they are intended merely to clarify FRA's intent when issuing the final rule related to auxiliary lights and to incorporate existing FRA enforcement policies related to locomotive headlights and auxiliary lights. The economic impact of the modifications and clarifications contained in this final rule will not generally affect the cost of compliance with the existing regulations.

Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq.*) requires a review of rules to assess their impact on small entities. FRA certifies that this final rule does not have a significant impact on a substantial number of small entities. Because the modifications retained in this document either clarify existing regulatory requirements, codify existing enforcement policy, or are consistent with FRA's intent when issuing the original regulatory provisions, FRA has concluded that there are no substantial

economic impacts on small units of government, businesses, or other organizations.

Paperwork Reduction Act

This final rule does not change any of the information collection requirements contained in the original regulatory provisions being amended.

Environmental Impact

FRA has evaluated this final rule in accordance with its “Procedures for Considering Environmental Impacts” (FRA’s Procedures) (64 FR 28545, May 26, 1999) as required by the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*), other environmental statutes, Executive Orders, and related regulatory requirements. FRA has determined that this document is not a major FRA action (requiring the preparation of an environmental impact statement or environmental assessment) because it is categorically excluded from detailed environmental review pursuant to section 4(c) of FRA’s Procedures.

Federalism Implications

FRA believes it is in compliance with Executive Order 13132. Because the modifications retained in this document either clarify existing regulatory requirements, codify existing enforcement policy, or are consistent with FRA’s intent when issuing the original regulatory provisions, this document will not have a substantial effect 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. This final rule will not have federalism implications that impose any direct compliance costs on State and local governments.

Unfunded Mandates Reform Act of 1995

Pursuant to Section 201 of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4, 2 U.S.C. 1531), each Federal agency “shall, unless otherwise prohibited by law, assess the effects of Federal regulatory actions on State, local, and tribal governments, and the private sector (other than to the extent that such regulations incorporate requirements specifically set forth in law).” Section 202 of the Act (2 U.S.C. 1532) further requires that before promulgating any general notice of proposed rulemaking that is likely to result in the promulgation of any rule that includes any Federal mandate that may result in expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100,000,000 or more (adjusted

annually for inflation) in any 1 year, and before promulgating any final rule for which a general notice of proposed rulemaking was published, the agency shall prepare a written statement” detailing the effect on State, local, and tribal governments and the private sector. Because the modifications retained in this document either clarify existing regulatory requirements, codify existing enforcement policy, or are consistent with FRA’s intent when issuing the original regulatory provisions, this document will not result in the expenditure, in the aggregate, of \$100,000,000 or more in any one year, and thus preparation of such a statement is not required.

Energy Impact

Executive Order 13211 requires Federal agencies to prepare a Statement of Energy Effects for any “significant energy action.” 66 FR 28355 (May 22, 2001). Under the Executive Order, a “significant energy action” is defined as any action by an agency (normally published in the **Federal Register**) that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of proposed rulemaking, and notices of proposed rulemaking: (1)(i) that is a significant regulatory action under Executive Order 12866 or any successor order, and (ii) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) that is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action. FRA has evaluated this final rule in accordance with Executive Order 13211. Because the modifications retained in this document either clarify existing regulatory requirements, codify existing enforcement policy, or are consistent with FRA’s intent when issuing the original regulatory provisions, FRA has determined that this document will not have a significant adverse effect on the supply, distribution, or use of energy. Consequently, FRA has determined that this regulatory action is not a “significant energy action” within the meaning of Executive Order 13211.

List of Subjects in 49 CFR Part 229

Auxiliary lights, Headlights, Locomotives, Railroad safety.

Adoption of the Amendment

■ In consideration of the foregoing, part 229 of chapter II of title 49 of the Code of Federal Regulations is amended to read as follows:

PART 229—RAILROAD LOCOMOTIVE SAFETY STANDARDS

- 1. The authority citation for Part 229 continues to read as follows:

Authority: 49 U.S.C. 20102–03, 20107, 20133, 20137–38, 20143, 20701–03, 21301–02, 21304; 49 CFR 1.49(c), (m).

- 2. Section 229.125 is amended by revising paragraphs (a) and (d)(2) to read as follows:

§ 229.125 Headlights and auxiliary lights.

(a) Each lead locomotive used in road service shall have a headlight that produces a peak intensity of at least 200,000 candela. If a locomotive or locomotive consist in road service is regularly required to run backward for any portion of its trip other than to pick up a detached portion of its train or to make terminal movements, it shall also have on its rear a headlight that produces at least 200,000 candela. Each headlight shall be arranged to illuminate a person at least 800 feet ahead and in front of the headlight. For purposes of this section, a headlight shall be comprised of either one or two lamps.

(1) If a locomotive is equipped with a single-lamp headlight, the single lamp shall produce a peak intensity of at least 200,000 candela. The following lamps meet the standard set forth in this paragraph (a)(1): a single operative PAR-56, 200-watt, 30-volt lamp; or an operative lamp of equivalent design and intensity.

(2) If a locomotive is equipped with a dual-lamp headlight, a peak intensity of at least 200,000 candela shall be produced by the headlight based either on a single lamp capable of individually producing the required peak intensity or on the candela produced by the headlight with both lamps illuminated. If both lamps are needed to produce the required peak intensity, then both lamps in the headlight shall be operational. The following lamps meet the standard set forth in this paragraph (a)(2): a single operative PAR-56, 200-watt, 30-volt lamp; two operative PAR-56, 350-watt, 75-volt lamps; or operative lamp(s) of equivalent design and intensity.

* * * * *

(d) * * *

(2) Each auxiliary light shall produce a peak intensity of at least 200,000 candela or shall produce at least 3,000 candela at an angle of 7.5 degrees and at least 400 candela at an angle of 20 degrees from the centerline of the locomotive when the light is aimed parallel to the tracks. Any of the following lamps meet the standard set forth in this paragraph (d)(2): an operative PAR-56, 200-watt, 30-volt lamp; an operative PAR-56, 350-watt,

75-volt lamp; or an operative lamp of equivalent design and intensity.

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Issued in Washington, DC, on March 10, 2004.

Allan Rutter,
Federal Railroad Administrator.

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