



# Federal Register

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**Monday,  
July 28, 2003**

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**Part II**

## **Department of Transportation**

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**Federal Railroad Administration**

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**49 CFR Part 214  
Roadway Maintenance Machine Safety;  
Final Rule**

**DEPARTMENT OF TRANSPORTATION****Federal Railroad Administration****49 CFR Part 214**

[Docket No. FRA-2000-8156, Notice No. 2]

RIN 2130-AB28

**Roadway Maintenance Machine Safety**

**AGENCY:** Federal Railroad Administration (FRA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** FRA is amending its Railroad Workplace Safety regulations by adding a new subpart prescribing safety standards for railroad on-track roadway maintenance machines and hi-rail vehicles. The purpose of these standards is to protect roadway workers during the lawful operation of this equipment and to promote railroad safety overall.

**DATES:** (1) *Effective Date:* This regulation is effective September 26, 2003.

(2) Any petition for reconsideration of any portion of the rule must be submitted no later than September 26, 2003.

**ADDRESSES:** A petition for reconsideration (identified by DOT DMS Docket Number FRA-2000-8156) 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.

*Instructions:* All submissions must include the agency name and docket number for this rulemaking. Note that all submissions received will be posted without change to <http://dms.dot.gov> including any personal information provided. Please see the Privacy Act heading under Regulatory Impact/ Notices, below.

*Docket:* For access to the docket to read background documents or comments received, go to <http://dms.dot.gov> at any time or to 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.

**FOR FURTHER INFORMATION CONTACT:** Allison H. MacDowell, Staff Director, Office of Safety Enforcement, Federal Railroad Administration, 1120 Vermont Avenue, NW., Mail Stop 25, Washington, DC 20590 (telephone: 202-493-6236), or Daniel L. Alpert, Trial Attorney, Office of Chief Counsel, Federal Railroad Administration, 1120 Vermont Avenue, NW., Mail Stop 10, Washington, DC 20590 (telephone: 202-493-6026).

**SUPPLEMENTARY INFORMATION:****Introduction***Background*

In May 1990, the Brotherhood of Maintenance of Way Employees (BMWE) filed a petition with FRA to revise the Track Safety Standards and add to them new regulations addressing the safety of roadway workers and roadway maintenance machines. In response, FRA first initiated a negotiated rulemaking to address roadway worker safety. The final rule resulting from that rulemaking was published in December, 1996 (*see* 61 FR 65959), and the regulations addressing roadway worker safety now reside in 49 CFR part 214, subpart C.

Also in 1996, FRA requested that the newly formed Railroad Safety Advisory Committee (RSAC) develop recommendations to the Administrator on how to address by rulemaking the revision of the Track Safety Standards petitioned by the BMWE. The RSAC agreed to the task and formed a Track Working Group to draft a proposed revision. The Track Working Group decided by consensus that the draft revision would update the Track Safety Standards found at 49 CFR part 213, and that a new set of regulations addressing the safety of on-track roadway maintenance machines would be initiated in a separate rulemaking. The RSAC approved by majority consensus a draft Notice of Proposed Rulemaking (NPRM) for revision of part 213 in October, 1996. The Administrator approved and signed the NPRM, which was published on July 3, 1997. *See* 62 FR 36138. The final rule was published on June 22, 1998 (*see* 63 FR 33992), and the revised track standards became effective on September 21, 1998.

Even after the publication of the revised Track Safety Standards, the Track Working Group remained in existence to accomplish two additional tasks accepted by the RSAC: The amendment of part 213 to add safety standards for Gage Restraint Measuring Systems (GRMS), and the amendment of

part 214 to add safety standards for on-track roadway maintenance machines. To accomplish the latter, the Track Working Group appointed a six-member Task Group to draft, by consensus, rule text and analysis for the preamble.

The Task Group consisted of representatives from FRA, Association of American Railroads (AAR), BMW, Norfolk Southern Railway Co., and an equipment supplier. The Task Group met several times and conducted numerous conference calls before drafting proposed rule language to recommend to the RSAC for approval. The Task Group's recommended proposed rule was approved by the RSAC in 2000, and the proposed rule was subsequently issued by the Administrator and then published on January 10, 2001. *See* 66 FR 1930.

FRA received comments from five organizations in response to the proposed rule. The commenters included the BMW, the AAR, Loram Maintenance of Way, Inc. (Loram), Transtar, Inc. (Transtar), and the Wisconsin Central System (Wisconsin Central). Loram recommended that FRA terminate the rulemaking because the Task Group included only one representative of the equipment industry who could not adequately represent the diversity of roadway maintenance equipment. Loram further suggested that, in the alternative, FRA should convene a task group that included at least two representatives of manufacturers and operators of roadway maintenance equipment.

In February 2002, the Task Group met with most of the commenters, as well as other representatives from the industry, to gain clarification of, and further discuss, the comments and suggestions provided by the commenters. The Task Group met with representatives of Loram, Plasser American, and the Railway Progress Institute, and then, by unanimous vote, recommended how this final rule would respond to each of the comments. (Discussion of those recommendations is detailed in the Section-by-Section Analysis segment of this document, below.) Thereafter, in May 2002, the Task Group's recommendations were unanimously approved by the full RSAC.

*Categories of Equipment*

When the Task Group began the task of developing a proposed rule for roadway maintenance machine safety, it initially divided roadway maintenance machines into three broad categories: on-track, on/off track (such as hi-rail vehicles), and off-track. The Task Group quickly decided to confine the regulations to on-track equipment and

equipment used both on and off track. The Task Group further divided two remaining categories of roadway maintenance machines into five sub-categories: Large self-propelled equipment; medium self-propelled equipment; small "walk-along" equipment; hi-rail equipment; and motor cars.

The Task Group conducted a systematic review of various types and configurations of machinery, as well as of their current use in the railroad industry. The Task Group determined that the railroad industry is rapidly phasing out the use of motor cars, replacing them with hi-rail vehicles. In fact, motor cars have not been manufactured for use in the United States in several years. Therefore, it was decided that there was no need to write a rule covering motor cars. However, if in the future, the industry returns motor cars for widespread use as inspection vehicles, FRA may reconsider its decision to exclude motor cars from this regulation.

Next, the Task Group decided to eliminate small "walk-along" track equipment from the scope of the new regulations. "Walk-along" equipment includes small pieces of track maintenance equipment that rolls on the rails but may not be self-propelled. This type of equipment includes tie borers, nut runners, portable rail grinders and other track maintenance equipment of similar size which can be placed on, or removed from, the track with relative ease by one or more roadway workers. The Task Group determined that the great variety of this type of equipment would necessitate writing a very complicated set of regulations governing a category of equipment that does not pose a very significant safety hazard. Therefore, the Task Group decided to focus the rulemaking on the three remaining sub-categories of roadway maintenance equipment: Large on-track machines, medium on-track machines, and hi-rail vehicles.

To distinguish large on-track machines from medium-sized on-track machines, the Task Group decided to consider the light weight of the vehicles. Large equipment was designated as "Category I" equipment and included on-track self-propelled roadway maintenance machines having a light weight of 17,500 pounds or more. "Category II" machines included similar equipment whose light weight was less than 17,500 pounds but more than 7,500 pounds.

The final categorization of covered roadway maintenance machines dealt with the age of the vehicles. The Task Group determined that all of the

regulations would apply to new machines. The Group decided to define "new" as any machine ordered for manufacture 90 days after the issuance of a final rule, to prevent the rule from interfering with the manufacture of new equipment already on order but not yet completed when the rule is issued.

Likewise, the Task Group believed it necessary to limit the number of older roadway maintenance machines that would need retrofitting following the issuance of a final rule. Because technology has changed and many types of roadway maintenance machines have been redesigned in more recent years, the Task Group determined that the new rule should not apply to the oldest equipment in the industry's collective fleet. Therefore, the Task Group decided that the requirements for retrofitting would not apply to any roadway maintenance machine manufactured prior to January 1, 1991.

With the parameters about types of equipment agreed upon, the Task Group then set out to determine what safety features on the machines should be covered by the regulations. The Group reviewed existing standards for work equipment issued by the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor, and discussed the American National Standards Institute (ANSI) and the Society of Automotive Engineers (SAE) standards, which are voluntary industry standards. The Group identified 18 items on the Category I and Category II machines that should be included in the regulations:

- Operator Seating;
- Brakes;
- Horn;
- Work Lights;
- Mirrors;
- Change of Direction Alarm;
- Fire Extinguisher;
- Safety Glass;
- Power Wipers;
- Strobe Light;
- Heat and Ventilation for Non-Pressurized Cab;
- Flagger Equipment;
- Headlights;
- Turntable Positive Restraint Device;
- Equipment Light Weight Displayed;
- Heat, Ventilation, and Air Conditioning for Pressurized Cab;
- Brake Lights; and
- First-Aid Kit.

For hi-rail vehicles, the Group determined that the regulations should address:

- Operator Seating;
- Brakes;
- Horn;
- Mirrors;
- Fire Extinguisher;

- Safety Glass;
- Power Wipers;
- Heat and Ventilation for Non-Pressurized Cab;
- Headlights;
- Equipment Light Weight Displayed;
- Brake Lights;
- Change of Direction Alarm;
- Strobe Light;
- Flagger Equipment; and
- First-Aid Kit.

Because the regulations are intended to cover hi-rail vehicles only when they are being used as on-track vehicles, the Task Group determined that the regulations should not replace any Federal or State requirements covering hi-rail vehicles when they are used as roadway motor vehicles.

As the discussions continued over many months in preparation of a proposed rule, some early decisions made by the Task Group changed. For example, the Category I and II designations, which helped the Task Group early in the discussions, eventually became unnecessary as proposed requirements changed. This final rule makes the distinction between large equipment and medium-sized equipment in only two instances, making it unnecessary to maintain the designated categories for purposes of the rule.

### *Shunting*

Early in the deliberations, the Task Group explored whether or not the regulations should require that the covered track maintenance machines be non-insulated for the purpose of shunting the track circuits. Machines capable of shunting track circuits would enable a track circuit to indicate track occupancy by the machine, affording an extra measure of protection for the track crew through the signal system, as well as protection at highway-rail crossings through the activation of warning devices at crossings so equipped.

The railroad industry has struggled many years to develop a technology that would provide reliable shunting capabilities for track maintenance machines. Even heavy equipment such as single unit self-propelled passenger cars and single unit locomotive consists without cars do not always shunt the track circuits. The Task Group discussed the advantages of current shunting technologies when the technologies work successfully, and balanced them against the possibility that the technologies might fail. Roadway workers could develop a false sense of security when using machines designed to shunt track circuits, perhaps relying too heavily on shunting as a

method of protection when the reliability of the shunting is not failsafe.

The Task Group agreed that, because present shunting technology has not advanced enough to guarantee a level of reliability necessary for track maintenance machines, this rule should not require that the machines be non-insulated. However, if FRA finds in the future that the technology has advanced to a high level of reliability for track maintenance machines, the agency may reconsider its position regarding insulation.

#### *Noise Conservation*

The Task Group considered including in the regulations a design standard that would require new roadway maintenance machines covered by the rule to maintain the noise level in the cab of the machine to no more than 85 dBA measured on the A-scale of a standard sound level meter at slow response over an eight-hour period. Hearing loss caused by exposure to loud levels of noise over an extended period of time is a significant issue among roadway workers. Workers on roadway maintenance machines are currently protected by OSHA regulations set forth in 29 CFR 1910.95, which require a covered employer to provide a hearing conservation program, hearing protection, and training for employees.

However, if FRA were to establish noise exposure standards here with a new design standard, such standards would oust OSHA's jurisdiction over hearing conservation, pursuant to section 4(b)(1) of the Occupational Safety and Health Act, 29 U.S.C. 653(b)(1). Therefore, with a design standard for new equipment, but no requirement for a hearing conservation program, personal hearing protection or employee training, the roadway workers affected by this rule would receive less protection than they receive now under OSHA regulations. In addition, an effort by FRA to enter the field of hearing conservation on some roadway maintenance machines could result in FRA displacing OSHA regulations for all roadway maintenance machines. This result would leave operators of roadway equipment not under the design standard (*i.e.*, older equipment or equipment weighing less than 7,500 pounds) with no hearing protection under Federal law whatsoever.

To prevent such an unwanted result, FRA would need to institute its own set of comprehensive regulations dealing with hearing protection, hearing conservation programs, and testing. Given the fact that OSHA currently has authority to address noise exposure and hearing loss for these employees, as well

as the requisite expertise at hand to do so effectively, FRA sees no need to duplicate such a program. In fact, as FRA understands, the railroads currently follow the OSHA regulations and have established hearing conservation programs that include these employees.

#### *Environmental Controls in Cabs*

The issue of environmental controls in cabs of roadway maintenance machines, including heating, air conditioning, and protection from air contaminants like silica dust, was the topic of much discussion among Task Group members. The Task Group worked hard to find a balance between environmental controls perceived to be safety enhancements and those perceived by some to be merely "comfort" improvements. The resulting requirement in this rule is therefore designed to protect employees working on certain types of roadway machines from air contaminants that may cause respiratory health problems for employees while also protecting equipment components from the effects of temperature extremes or degradation from dust and debris. This standard will also enhance safety by reducing noise inside the cab, thereby effectuating clearer radio communications between employees. In addition, the standard will afford clearer visibility for those working inside the cab.

Under this regulation, OSHA environmental standards, which already govern the working environments of roadway maintenance machines, essentially remain in effect. By cross-referencing in this regulation the OSHA standards contained in 29 CFR 1910.1000, FRA becomes the enforcing agency as to environmental controls over the selected types of equipment, rather than OSHA. Environmental controls in equipment not covered by this rule and the limiting of exposure to employees working outside equipment remain subject to OSHA enforcement, and the regulation is the same (29 CFR 1910.1000).

It is important to note that the rule cross-references OSHA standards without limiting the references to OSHA standards in effect on a certain date. As with all regulatory agencies, OSHA from time to time revises and updates its standards. By cross-referencing the OSHA standards without limiting the references to standards in effect on a certain date, this regulation automatically references any revisions by OSHA to these standards so as to remain in conformance with any revised OSHA standards. This action prevents the undesirable result whereby

operators of roadway maintenance machines covered by this regulation could receive less protection than other operators in the event that OSHA revises any of the referenced standards.

The regulation requires positive pressurized ventilation systems with temperature controls only on new roadway maintenance machines as defined in § 214.7. In addition, the requirement is limited to ballast regulators, tampers, mechanical brooms, rotary scarifiers, undercutters, and other equipment with equivalent functions. It is FRA's understanding that these types of equipment are now typically manufactured with engineering controls that prevent inhalation of hazardous substances. The regulation requires temperature controls because, by their nature, pressurized cabs require full enclosure without access to open windows or similar sources of ventilation. It becomes imperative, therefore, that the cabs also be equipped with a means to control the temperature inside the cab. If the engineering controls fail for the ventilation system of any roadway maintenance machine covered by the requirement, employees on the machine must be equipped with personal respiratory protective equipment that is operative and meets the OSHA standards contained in 29 CFR 1910.134.

To prevent confusion about which agency has enforcement authority over specific roadway maintenance machines, the rule requires railroads to maintain a roster of machinery that falls under FRA's jurisdiction for purposes of this regulation. The roster may be maintained on paper or electronically, but it must be accessible and available to FRA, OSHA, and other Federal and State agencies so that inspectors may determine which agency has responsibility for inspection of which machines. The roster is intended to prevent confusion that may otherwise cause certain machines to be inspected by two Federal agencies while other machines go uninspected altogether.

Although the regulation addresses pressurized cabs and temperature controls for only certain types of new roadway maintenance machines, railroads are not precluded from equipping other types of machinery, or older machinery, with the same features. If the railroad desires that FRA become the inspection agency for those machines so retrofitted, the railroad may simply add the designated machines to the roster. However, once added to the roster, a designated machine must remain on the roster until it is retired or its ownership changes.

### Crane Safety

In 1998, the BMW petitioned FRA to issue new regulations governing the safety of on-track railroad maintenance cranes. Currently, the safety of railroad crane operations is governed generally by OSHA regulations at 29 CFR 1910.180. Through its petition, the BMW sought to reduce the number of railroad crane operators who are killed or seriously injured when cranes accidentally tip over due to shifting loads, excessive loads, defective equipment, supervisor misjudgment, or operator error.

However, this rule is not intended to cover crane safety as envisioned by the petition. For example, this rule does not address those elements of crane safety involving the lifting and transferring of loads. Further, FRA makes clear that this rule is not intended to displace OSHA's regulations governing crane safety at 29 CFR 1910.180. FRA has made a commitment to gather additional data and information regarding crane safety. Upon completing that effort, FRA will consult with members of the Task Group and, if appropriate, seek the advice of the RSAC about the necessity of issuing FRA regulations as called for in the BMW's petition.

### Section-by-Section Analysis

FRA is amending 49 CFR part 214 by adding a new subpart D specifically devoted to the prevention of accidents and casualties caused by the operation of on-track roadway maintenance machines and hi-rail vehicles. FRA is also amending subpart A of part 214 by adding new definitions to § 214.7 that describe and categorize the types of on-track roadway maintenance machines and hi-rail vehicles that subpart D addresses.

#### Section 214.7 Definitions

Section 214.7 contains additional entries which are particularly important to the understanding of the types of equipment that are to be covered by the new rule. Subpart D addresses two general types of roadway maintenance machines. "On-track roadway maintenance machines" are defined as self-propelled, rail-mounted, non-highway roadway maintenance machines whose light weight is in excess of 7,500 pounds and whose purpose is not for the inspection of railroad track. "Hi-rail vehicles" are defined as roadway maintenance machines that are manufactured to meet Federal Motor Vehicle Safety Standards and are equipped with retractable flanged wheels so that the vehicles may

travel over the highway or on railroad tracks.

Both on-track roadway maintenance machines and hi-rail vehicles are further classified as "new" for the purposes of this rule. A "new" on-track roadway maintenance machine is defined as an on-track roadway maintenance machine which is ordered after December 26, 2003 and completed after September 27, 2004. Whereas, a "new" hi-rail vehicle is defined as a hi-rail vehicle which is ordered after December 26, 2003 or completed after September 27, 2004. The result of these somewhat different definitions is to afford new on-track roadway maintenance machines more time to be built in compliance with the rule, due to the concern that it would take longer to do so for such machines than for hi-rail vehicles. On-track roadway maintenance machines are further classified as "existing," comprising any on-track roadway maintenance machines covered by this subpart which do not meet the definition of "new" on-track roadway maintenance machines. Hi-rail vehicles are not further classified as "existing" in the text of this rule. However, when the term "hi-rail vehicle" is used in the rule text, in distinction to the term "new hi-rail vehicle," any hi-rail vehicle covered by this subpart is included, whether "new" or not. Nevertheless, in some portions of this rule's preamble FRA does refer to "existing" hi-rail vehicles for added clarity in explaining when a specific section of the rule addresses all hi-rail vehicles covered by this subpart.

Roadway maintenance machines not included within the scope of subpart D are "on-track roadway maintenance machines" whose light weight does not exceed 7,500 pounds, off-track equipment such as bulldozers, backhoes, and road graders, as well as that class of antiquated equipment referred to as motor cars. Although this equipment is not covered under the scope of subpart D, it nevertheless meets the general definition of "roadway maintenance machines" as defined in this section for purposes of the Roadway Worker Protection regulations contained in subpart C of this part.

In addition, it is important to note here that the term "employer" as defined in subpart A includes both railroads and contractors of railroads. In subpart D, FRA has used the term "employer" as defined; that is, both railroads and their contractors are subject to the requirements of subpart D.

One commenter, Loram, objected to the definition of "new" roadway maintenance equipment, stating that the proposed definition was confusing and

provided a lead-time that is too short. The commenter also questioned the definition's apparent assumption that all roadway maintenance machines are ordered to specifications when in fact some machines are built in anticipation of future orders. The commenter suggested that the definition of "new" machines be "any machines completely manufactured more than one year after issuance of the final rule." After discussion of the comment, the Task Group voted unanimously that the definition already developed by its members and approved by the entire RSAC is a more effective definition to apply to the regulation. FRA agrees with the reasoning of the Task Group; therefore, no change has been made.

#### Section 214.501 Purpose and Scope

The purpose for the minimum safety standards prescribed under this subpart is the protection of roadway workers during the lawful operation of on-track roadway maintenance machines and hi-rail vehicles. This subpart prescribes minimum safety standards for on-track roadway maintenance machines and hi-rail vehicles, although railroads and railroad contractors (referred to collectively as "employer" throughout subpart D, as the term is defined in subpart A) may adopt more stringent standards as long as they are consistent with this subpart. As it has done in other regulations, FRA is including railroad contractors within the scope of this regulation. A good deal of track maintenance is performed by contractors to railroads, so it is important for those entities to fall within the requirements for safe performance of that work.

This section further states that any working condition which involves the protection of railroad employees engaged in roadway maintenance duties but which is not specifically addressed in this subpart (for example, noise exposure) continues to be governed by the regulations of OSHA. The purpose of this section is to avoid the unintentional displacement of OSHA safety regulations governing the roadway maintenance machine work environment.

Furthermore, all of the provisions set forth in subpart A to this part, which concerns the purpose and scope of this part, apply to subpart D as well.

FRA received no comments in response to this section of the proposed rule; therefore, no changes from the proposed rule have been made.

*Section 214.503 Good-Faith Challenges; Procedures for Notification and Resolution*

This section outlines the circumstances under which employees operating on-track roadway maintenance machines and hi-rail vehicles are guaranteed the right and have the responsibility to make challenges relative to the operation or condition of on-track roadway maintenance machines and hi-rail vehicles. In the final rule, FRA has expressly added hi-rail vehicles as roadway maintenance machines covered by the requirements of this section. Hi-rail vehicles were not intended to be treated differently and excluded from this section's requirements. It is consistent with safety to afford the operators of hi-rail vehicles the same protections- and impose on them the same obligations-under this section as the operators of on-track roadway maintenance machines.

Paragraph (a) addresses the employee's responsibility to inform the employer whenever the employee makes a good-faith determination that the on-track roadway maintenance machine or hi-rail vehicle does not comply with FRA regulations or has a condition that inhibits its safe operation. The employee should consider not only the minimum safety requirements specified in this subpart, but also the general requirements specified in § 214.341 of subpart C, which also address the safety of roadway workers who operate or work near roadway maintenance machines.

A challenge must be made in good faith in order to fall within the purview of this section.

Paragraph (b) guarantees the employee's right of refusal to operate any on-track roadway maintenance machine or hi-rail vehicle once the employee has made a good-faith determination that the machine or vehicle does not meet all the requirements of this subpart, or has a condition that inhibits its safe operation. As specified in § 214.531, this rule generally allows the employer up to seven days to repair a roadway maintenance machine or hi-rail vehicle found to be noncompliant. However, the employer cannot require an employee, who in good faith challenges the fitness of a machine or vehicle, to operate the machine or vehicle until the challenge has been resolved.

Under paragraph (c), each employer must have in place, and must adhere to, written procedures for attaining a prompt and equitable resolution of challenges resulting from good-faith

determinations made in accordance with this section. The procedures shall outline the steps the employer will take to investigate each good-faith challenge. They shall also include steps to be taken when the employer's investigation shows that the challenged machine or vehicle should not be used as it is, to ensure that the challenged machine or vehicle is not used until repaired or removed from service to comply with this subpart. Further, the written procedures shall include the title and location of the employer's designated official(s) for the purpose of reporting conditions found to be in non-compliance with this subpart, to ensure that machine and vehicle operators are informed as to whom they should address any good-faith challenges. FRA's purpose in requiring these procedures is to make certain that a machine or vehicle operator who makes a good-faith challenge of a machine's or vehicle's fitness to operate receives an explanation of the employer's decision to either keep the machine or vehicle in service, repair it, or replace it. FRA will not consider an employer to be in compliance with this section if it responds to any good-faith challenge with a mere "yes" or "no" answer.

FRA envisions that operators will challenge the fitness of an assigned machine or vehicle only in good faith, and the employer likewise will respond in good faith as well. FRA realizes that an employer's fleet of roadway maintenance machines and hi-rail vehicles may be very large and that machines and vehicles may sometimes become unfit for safe use without the employer's immediate knowledge. This provision seeks to establish a system under which a machine or vehicle operator, who on any day may be in the best position to assess the safety fitness of a particular machine or vehicle, can bring to the employer's attention safety deficiencies and other defects that should be immediately addressed.

However, FRA does realize that sometimes defects can appear to be more serious than they actually are. What may appear to be a defect jeopardizing operational safety may in reality be a minor flaw that can be addressed at a later, more convenient time or location. This section allows an employer to investigate a good-faith challenge to a roadway maintenance machine's and hi-rail vehicle's safety fitness and make its own good-faith determination that the machine or vehicle may be used without immediate repairs. However, this section requires good faith on the part of all parties involved. If FRA determines that an employer has not exercised good faith in

determining that a machine or vehicle need not be immediately repaired or replaced, FRA may seek enforcement action against the employer for being in violation of this section. On the other hand, FRA will not consider an employer's response to a challenge to be a violation of this section if FRA determines that the challenge was made for purposes of disrupting or delaying work or in a manner demonstrating motivations other than good faith and concern for safety.

In the final rule, FRA has modified paragraph (a) to make it more consistent with paragraphs (b) and (c) by expressly focusing the employee's good-faith challenge on the condition of the machine or vehicle, instead of on the employer's rules governing the machine or vehicle. As paragraph (a) read in the NPRM, the employee would have been required to inform the employer whenever the employer's rules governing the machine did not comply with FRA regulations. However, paragraphs (b) and (c) in the NPRM expressly focused on the safety of the machine itself. For example, paragraph (c) referred to the employer's "challenged machine"—not to the employer's "challenged rule." FRA's modification of paragraph (a) eliminates this inconsistency.

One of the commenters to the proposed rule, Loram, objected to the rule's guarantee of an employee's right to refuse to operate a roadway maintenance machine which the employee has determined in good faith to be non-compliant with the regulation. The commenter suggested that one employee could, in effect, shut down a rail operation if a single machine does not meet all of the many requirements of the rule. Loram stated that mechanisms are already in place on railroads for such disputes to be resolved. Furthermore, Loram added that the provision itself suggests that there is necessarily an adversarial relationship between employers and employees in the railroad industry. According to Loram, this regulation would add to the burden of regulations already imposed on the industry.

In considering this comment, it was noted that the language of the regulation is modeled after the good-faith challenge that is permitted of employees who are working under the roadway worker safety regulations in subpart C to this part. Since the early months of 1997 when the roadway worker safety regulations became effective, few roadway workers have exercised the good-faith challenge provision. As far as FRA is aware, in each case where the challenge has been exercised, the

roadway worker sought to address a legitimate safety concern. The Task Group reiterated its belief that the provision is a necessary part of the new regulation. FRA believes that this provision is necessary for employee safety and that it does not impose an undue burden; therefore, FRA has declined to adopt Loram's comment.

*Section 214.505 Required Environmental Control and Protection Systems for New On-Track Roadway Maintenance Machines*

This section requires that certain types of new on-track roadway maintenance machines be equipped with enclosed cabs with positive pressurized ventilation systems that include climate control. By design, most pressurized ventilation systems do not provide a means of exchanging internal air for outside air while the roadway maintenance machine is in operation. In other words, the machine cabs with pressurized ventilation systems generally are not equipped with other means of ventilation or climate control, such as operable windows. Therefore, the requirement for positive pressurized ventilation systems necessitates that these machines also be equipped with operative heating and air conditioning systems.

The equipment covered by this section includes ballast regulators, tampers, mechanical brooms, rotary scarifiers, undercutters, and other equipment with equivalent functions. This equipment is used to perform track and roadbed maintenance and typically causes significant noise, debris, and dust. This work often occurs while employees are situated both in the cab of the equipment and along the right-of-way, in close proximity to the equipment as it is operated.

The requirements of this section provide for the safety of employer operations and employees in a variety of ways:

- The visibility of those working in the cab is improved.
- Employees working in the cab are protected from exposure to unhealthy levels of silica dust, which is prevalent in many regions of the country where track repair work is done, as well as other air contaminants.
- Equipment components are protected from temperature extremes and the degradation that may occur due to concentrations of dust and debris.
- Any combustion fumes generated by the equipment are prevented from entering the cab, so that employees are not exposed to the potential hazards of fuel exhaust.

- With diminished noise, dust, and debris in the cab, employees are better able to communicate with one another in the cab and, through the use of radios, with those employees working on the ground who might be placed at risk if the equipment moves or operates unexpectedly.

FRA is cross-referencing and enforcing OSHA environmental standards contained in 29 CFR 1910.1000. Environmental controls of on-track roadway maintenance machines not covered by § 214.505 are governed by these same OSHA regulations, but compliance continues to be enforced by OSHA. It is FRA's understanding that new roadway maintenance machines of the types covered by this section are manufactured with engineering controls that prevent the inhalation of hazardous substances, as required by OSHA standards. By adopting the OSHA regulations for such new machinery, FRA is in a position to make progressive improvements in the environmental quality of roadway equipment based upon a foundation of protection already established by OSHA.

Employers must maintain a roster of roadway maintenance machines that come under FRA's jurisdiction for purposes of this regulation. The roster, which may be electronic, must be readily available to FRA and other Federal and State agencies upon request so that inspectors may determine which agency has responsibility for enforcement of respiratory safety regulations for each roadway maintenance machine.

Employers may elect to include on the roster existing roadway maintenance machines that are equipped with engineering controls for air ventilation. These machines designated for inclusion on the roster may be ones manufactured with engineering controls for ventilation or machines retrofitted by the employer to have engineering controls. When added to the roster, a designated machine becomes subject to FRA inspection and enforcement, and it must remain on the roster until it is retired or its ownership changes.

FRA recognizes that engineering controls for ventilation may fail from time to time. Consequently, when a new or designated roadway maintenance machine of the type listed in paragraph (a), or functionally equivalent thereto, does not offer the protection required by 29 CFR 1910.1000 because the engineering controls have temporarily failed, the employer must provide employees in the cab of the machine with personal respiratory protective equipment for protection from air

contaminants, in accordance with paragraph (e). Paragraph (f) specifies that the personal respiratory protective equipment must be operative and comply with standards issued by OSHA in 29 CFR 1910.134. These OSHA standards require employers to use respirators certified by the National Institute for Occupational Safety and Health (NIOSH). Employers must have in place a respiratory protection program including procedures for proper inspection and maintenance of the respirators and medical evaluations of personnel designated to use the respirators.

By referencing OSHA's regulations already in effect, FRA is not imposing a new burden on employers. Rather, FRA is simply adopting standards that are already required by another government agency. The requirement for heating, air conditioning, pressurized cabs, and personal respiratory protective equipment in these new roadway maintenance machines constitutes an exercise of FRA jurisdiction over the working condition of employee exposure to temperature extremes and air contaminants for those employees working in the cabs of this equipment. This exercise of FRA jurisdiction consequently ousts any authority or enforcement power of OSHA concerning working conditions related to the operation of air conditioning and heating systems or high levels of air contaminants in the cabs of this equipment. FRA makes clear that it is prepared to address any failure to comply with the working condition requirements, either through consultation with employers to remedy any problems or by taking enforcement action to bring about compliance.

In cross-referencing the OSHA standards, FRA makes clear that when OSHA revises the standards FRA will enforce the revised standards on those machines over which FRA has jurisdiction. This will ensure that any OSHA revision does not create an inconsistency whereby some types of roadway maintenance machines would be governed by the revised standards enforced by OSHA and others would be governed by the standards without the revisions as enforced by FRA.

FRA makes clear that it is not adopting those OSHA standards that include protection from silica dust for employees not working inside the cabs of on-track roadway maintenance machines covered by this section. The extent of FRA's adoption of OSHA standards in this section reaches only as far as the cab of the covered on-track roadway maintenance machine. As a result, when working inside the cab,

workers receive protection from FRA; when working outside the cab, workers receive protection from OSHA. For example, roadway workers working along the right-of-way will continue to receive silica dust protection as administered by OSHA. In addition, to make clearer which employees are protected by this section when the ventilation system fails on a machine, FRA has modified paragraph (e) to make clear FRA's intent that the protections of this section apply only to employees "in the cab" of the machine, and not generally to any employee "on the" machine, whether inside the cab or not, as stated in the NPRM.

FRA also makes clear that this section of the final rule does not constitute an exercise of FRA authority over noise exposure for employees working on or around equipment covered by this section. This section does not establish permissible noise exposure levels for employees working on or around this equipment. OSHA's existing standards for noise exposure at 29 CFR 1910.95 continue to apply.

Paragraph (g) applies to new on-track roadway maintenance machines with enclosed cabs that are not of the type covered by paragraph (a). These new on-track roadway maintenance machines must be equipped with operative heating and ventilation systems.

Paragraph (h) refers to new on-track roadway maintenance machines that have, in addition to the main cab, non-enclosed operator stations in other places on the machine. These stations must be equipped with a covering of some kind that protects the operator in that position from midday sun or from normal rain. Of course, there will be times during the day when the sun is in such a position in the sky that a covering will not completely protect the operator from the sun. Likewise, a cover may not completely protect an operator from very heavy or wind-driven rain. This paragraph is not intended to require coverings to protect the operator in all circumstances. The coverings are required only when the design of the machine allows for the placement of a covering. Some operators' positions may be situated such that the addition of a covering is either impossible or would obstruct another working part of the equipment. In those instances, the coverings are not required.

One of the commenters to the NPRM, Loram, noted that the proposed rule referenced silica dust as an air contaminant that would be addressed by pressurized cabs on roadway maintenance machines. Loram suggested that the final rule be directed more specifically to silica dust

contamination. The Task Group disagreed. Air contaminants generated by roadway maintenance work may include more than silica. Following a discussion of the issue at a meeting with the Task Group, Loram withdrew the comment stating that it agreed that the rule should address the broader issue of contaminants.

Loram further suggested that the final rule clearly define the word "cab" as a "structure in which crews are housed and from which they operate controls required for the machine to carry out its primary function or movement." According to Loram, some machines are equipped with "work rooms, convenience areas and storage locations" which may resemble a cab. The Task Group disagreed that the word "cab" requires specific definition, and FRA has not adopted Loram's comment. FRA does not believe there should be any confusion about the term "cab." The types of compartments described by Loram as resembling a cab are typically found on rail grinders only. However, rail grinders are not covered by this section of the rule.

Loram also commented that the proposed rule did not clearly distinguish between the types of equipment requiring enclosed cabs from equipment that must be provided with an overhead covering above the operator's stand. Loram suggested that this distinction could be accomplished by listing the elements each type of feature (enclosed cab or overhead covering) is meant to shield against. The Task Group discussed this comment directly with representatives of Loram at the Task Group meeting following publication of the NPRM. Loram acknowledged that it had misread the proposed regulation and withdrew the comment from consideration.

In commenting on the NPRM, Transtar maintained that small railroads would bear an onerous burden from the requirement that personal respiratory protective equipment be supplied to employees in the event of a failure of the environmental controls in a pressurized cab. Transtar suggested that the regulation permit employers to use "engineering and/or administrative controls" when the environmental controls fail on pressurized cabs. Transtar did not identify what those engineering and administrative controls should be. The Task Group disagreed with Transtar and FRA has not adopted the comment. The provision would not present a new burden since it mirrors OSHA regulations already in effect.

Transtar also stated that the proposed regulation did not clearly describe the demarcation between FRA's jurisdiction

and OSHA's jurisdiction over the working conditions of the roadway maintenance machines. The Task Group believed that this division of enforcement jurisdiction between the two agencies was discussed extensively in the preamble and recommended that the language of the proposed rule remain the same. FRA believes that it has addressed this issue in both the NPRM and this final rule.

#### *Section 214.507 Required Safety Equipment for New On-Track Roadway Maintenance Machines*

This section contains requirements for safety equipment for all new on-track roadway maintenance machines. Several of the requirements are structural in nature, such as seats and handrails, and would be best met through engineering design by the equipment manufacturer. Other requirements, like fire extinguishers and first-aid kits, can be installed either by the manufacturer or by the employer after delivery from the manufacturer.

Paragraph (a) requires that each new on-track roadway maintenance machine be equipped with a seat for each operator, unless the machine is designed to be operated by an operator in the standing position. Further, each roadway worker transported on an on-track roadway maintenance machine is required to have a safe and secure position with handholds, handrails, or a secure seat. These safe and secure positions must be located so that they offer protection from moving parts of the machine which could entangle clothing or body extremities. In the final rule, FRA has modified paragraph (a)(2) to make clear that moving parts of the machine which could entangle clothing or body extremities are not located only inside of the cab. This is consistent with the preamble to the NPRM which described the proposed protection from moving parts of the machine generally, without limiting that protection to parts located inside of the cab, and makes good safety sense.

In the NPRM, FRA offered to consider adding regulatory language to the final rule to describe "safe and secure positions" with more specificity. FRA requested comment on the need for a more specific description and asked for suggestions about what the description should include. The AAR responded to the request by stating that the phrase "safe and secure positions" needed no further definition. The BMW suggested that a safe and secure position should have a minimum of three points of contact for a person riding in that position. Loram commented that any description of "safe and secure" should



not include a definition of how seats should be mounted, as this decision should be left to the vendor's discretion. In this final rule, FRA has decided to follow the recommendation of the Task Group by not changing the proposed language, except to place the last clause of the paragraph in its own sentence for clarity. Only the comment from the BMW E could be considered as supporting a more specific requirement, and, in any event, FRA believes that the requirement is consistent with three-point protection.

Some on-track roadway maintenance machines are equipped with turntables to allow them to quickly change working direction when wye or loop tracks are not readily accessible. Paragraph (a)(3) requires that new machines equipped with turntables have a positive method of mechanical securement, through engagement of pins and hooks, to prevent the lowering of the turntable device below the head of the rail when not in use. This arrangement of pins and hooks provides a safety redundancy in case the main activation system fails or is accidentally triggered.

In commenting on the NPRM, Loram stated that the proposed rule neglected to address positive lockouts for other types of roadway maintenance equipment that may also encroach on the area below the top of the rail. The Task Group concluded that the proposed rule, which addressed positive securement of turntables for new and existing roadway maintenance machines, adequately addressed the machinery intended to be covered by this rule. FRA agrees. The rule focuses on roadway maintenance machines equipped with turntables because turntables may be held in place simply by hydraulic pressure, which may be bleed off and unintentionally lower the turntable device. Other roadway maintenance machines have pins, clamps, or other devices to positively secure equipment that may encroach on the area below the top of the rail. FRA is not aware of any other type of roadway maintenance machine, other than machines equipped with turntables, which needs to be subject to this requirement. Accordingly, FRA has not adopted the comment.

Paragraph (a)(4) requires new on-track roadway maintenance machines to have windshields made of safety glass or other material with similar properties, such as Lexan. The machinery is also required to have power windshield wipers. However, in cases where traditional windshield wipers are incompatible with the windshield material, the employer must provide a

suitable alternative that offers the operator an equivalent level of vision.

Paragraph (a)(5) requires that new on-track roadway maintenance machines be equipped with primary braking systems capable of effectively controlling the movement of the machines under normal operating conditions.

Paragraphs (a)(6) and (7) together require that new on-track roadway maintenance machines must have a suitable first-aid kit and fire extinguisher readily accessible to the operator(s). The first-aid kit must comply with OSHA regulations prescribed at 29 CFR 1926.50(d)(2). Consequently, the first-aid supplies in the kits must be in individual sealed packages for each type of item and placed in a weatherproof container. Further, the OSHA regulations specify that the kits must be inspected before being sent out on each job and at least weekly to ensure that expended items are replaced. The referenced OSHA standard does not regulate the minimum contents of the first-aid kit, but it recommends as an example the description of the contents of a generic first-aid kit described in American National Standard (ANSI) Z308.1-1978, "Minimum Requirements for Industrial Unit-Type First-aid Kits." See Appendix A to 29 CFR 1926.50.

FRA does not intend that a railroad be required to open the first-aid kit each time to confirm that the proper supplies are in the kit. Rather, FRA would expect that railroads would apply a seal of some kind to a properly supplied first-aid kit to show that it contains the proper supplies. An employee inspecting a first-aid kit with an unbroken seal would be able to presume that the kit contains the proper supplies. As a result, the burden of inspecting the first-aid kits would be significantly minimized.

The fire extinguisher required by this section must be operative and properly charged, securely mounted near the operator's work station, and designed with a rating of 5 BC or higher. A fire extinguisher with a "BC" rating is suitable to combat fires generated by flammable liquids or electrical equipment. The "5" designation indicates the extinguisher's volume and fire-fighting capacity. A requirement of a 5 BC rating is consistent with workplace standards in other industries.

In commenting on the NPRM, Transtar stated that a requirement for first-aid kits and fire extinguishers to be on board roadway maintenance machines would be too expensive for the railroad industry, given the vulnerability of this type of equipment to vandalism and theft. Transtar

suggested that the regulation require that first-aid kits and fire extinguishers be "readily available." During the development of the NPRM, the placement of first-aid kits and fire extinguishers was extensively discussed by the Task Group. The Task Group was able to reach consensus on the proposed language after lengthy debate, and the RSAC later agreed with the proposal. After discussing Transtar's comment, the Task Group recommended that FRA decline to change the language of this portion of paragraph (a). FRA agrees with the Task Group's recommendation, and has not changed the final rule in response to the comment. FRA has not found the cost of complying with the requirements to be burdensome, and in any case first-aid kits and fire extinguishers serve vital safety interests.

When new on-track roadway maintenance machines are designed to be operated with the operator in a standing position, the requirements of paragraph (a)(1) of this section do not apply. Instead, paragraph (b) requires these machines to be designed and equipped with handholds and handrails that provide the operator with a safe and secure position.

Paragraph (c) requires that each new on-track roadway maintenance machine with a light weight in excess of 32,500 pounds be equipped with a speed indicator if the machine is operated at speeds in excess of 20 mph. The speed indicator must be calibrated to be accurate within  $\pm 5$  mph of the actual speed when speeds are 10 mph or greater.

Paragraph (d) requires the manufacturer of new on-track roadway maintenance machines to display the as-built light weight of the machine. The light weight of the machine is calculated when the machine is not loaded with passengers or extraneous equipment not part of the machine itself. The light weight must be displayed in a conspicuous location on the machine and will serve to identify its proper category for the purposes of this regulation. The light weight will also provide essential information to crane operators in the event the machines are lifted on to—or loaded off of—flatbed trucks or rail cars for movement from one work site to another.

#### *Section 214.509 Required Visual Illumination and Reflective Devices for New On-Track Roadway Maintenance Machine*

This section prescribes requirements for lights and reflective devices for new on-track roadway maintenance machines. An on-track roadway maintenance machine operator must

have sufficient light to safely work or travel, especially during nighttime operations. The requirements will also help to make these machines more visible to roadway workers on the track and to vehicular traffic at highway-rail grade crossings.

This section makes several references to visibility in normal weather and atmospheric conditions. The requirement to illuminate the track ahead for a minimum distance of 300 feet is a measure to be considered under generally clement weather and atmospheric conditions. FRA understands that during periods of rain, fog, snow and other occurrences that are common in normal weather patterns, the lighting capability of the illumination devices may temporarily be unable to reach a full 300 feet. These temporary instances when full illumination is not possible will not be considered a violation of this regulation. In addition, FRA will not consider unusual weather events such as hurricanes, tornadoes, eclipses, or horizontally driven snow to be normal weather and atmospheric conditions under which the regulation must be met.

Paragraph (a) requires an illumination device, such as a headlight, capable of illuminating obstructions on the track ahead in the direction of travel for a minimum distance of 300 feet under normal weather and atmospheric conditions. In commenting on the NPRM, Loram stated that the requirement should define the area of the track and roadbed to illuminate and include a specific value of adequate illumination or a light intensity minimum. Nevertheless, the Task Group was satisfied with the language of paragraph (a) in the NPRM for purposes of its application to new on-track roadway maintenance machines. FRA has elected not to change paragraph (a). FRA believes that this performance requirement provides sufficient specificity for the regulated industry.

When on-track roadway maintenance machines are operated during the period between one-half hour after sunset and one-half hour before sunrise, or in dimly lit areas such as tunnels, they are required by paragraph (b) to be equipped with operating work lights unless equivalent lighting is otherwise provided, for example, by portable wayside lighting.

Paragraph (c) requires an operative warning light or beacon mounted to the roof of new on-track roadway maintenance machines. The light or beacon must be designed to flash intermittently while rotating 360 degrees or otherwise emitting light in a

360-degree field. Exempt from this requirement are on-track roadway maintenance machines designed without fixed roofs that have a light weight less than 17,500 pounds.

In commenting on the NPRM, Loram stated that the proposed requirement for a light that rotates 360 degrees would seem to disallow the use of strobe lights. In considering Loram's comment, the Task Group concluded that the NPRM's preamble language concerning paragraph (c) was confusing. FRA agrees with Loram and the Task Group and makes clear that, while the light or beacon required by this paragraph must emit light in a 360-degree field, it does not have to rotate to do so. The intent is that the light or beacon be visible to someone in the vicinity of the machine, whether that person is in front, back, or to the side of the machine. A strobe light that intermittently flashes light in a 360-degree field, but does not need to rotate to do so, would certainly fulfill the requirements of this paragraph.

FRA notes that in the NPRM the second sentence of paragraph (c) reads: "New roadway maintenance machines that are not equipped with fixed roofs and have a light weight greater than 7,000 pounds but less than 17,500 pounds are exempt from this requirement;" (emphasis added). The reference to "7,000 pounds" was in error and should have read "7,500 pounds." Yet, FRA is removing the reference as unnecessary because a machine having a weight of 7,500 pounds or less does not meet the definition of an "on-track roadway maintenance machine" in § 214.7 and, therefore, is not subject to the requirements of this section.

Paragraph (d) requires new on-track roadway maintenance machines to be equipped with brake lights activated by an application of the machine braking system. The brake lights must be visible for a distance of at least 300 feet under normal weather and atmospheric conditions.

In commenting on this paragraph, Loram pointed out that the regulation does not seem to consider roadway maintenance machines that move in both directions. To the extent Loram's comment concerns older equipment, FRA notes that such equipment is not covered by the requirements of this section. Rather, existing on-track roadway maintenance machines are covered by the requirements of § 214.517(d), below, which permits the use of reflective material instead of brake lights. Of course, new on-track roadway maintenance machines must be equipped with brake lights, and those new machines that move in both

directions will need to have brake lights on both ends of the machines. Even if a machine that moves in both directions is wired so that the brake lights apply on both ends at the same time, FRA does not believe that this creates an operational problem that needs to be addressed as FRA has done in this rule for change-of-direction alarms. See § 214.511(b). In fact, this may even enhance safety in certain situations. Nevertheless, as was noted in the Task Group's discussions, a machine may be equipped with a toggle switch to allow the operator to indicate the direction of the machine's travel so that the brake lights operate only on the trailing end of the machine's movement. For the foregoing reasons, the text of paragraph (d) remains unchanged from the NPRM.

Paragraph (e) requires that new on-track roadway maintenance machines be equipped with operative rearward viewing devices, such as rearview mirrors or their functional equivalent, to enable machine operators to better see other machines or roadway workers within their immediate work zone. Video cameras and monitors may be used to comply with the requirements of this paragraph.

#### *Section 214.511 Required Audible Warning Devices for New On-Track Roadway Maintenance Machines*

This section requires audible warning devices on new on-track roadway maintenance machines to provide additional safety for roadway workers and other machine operators.

Paragraph (a) requires audible warning devices, such as horns, that produce sound loud enough to be heard by roadway workers and other machine operators within the immediate work area. The triggering mechanism for the audible warning device must be clearly identifiable and within easy reach of the machine operator.

Paragraph (b) requires automatic change-of-direction alarms that produce an audible signal that is at least three seconds long and uniquely distinguishable from any surrounding noise. Except as noted below, the change-of-direction alarm must sound automatically in each instance when the on-track roadway maintenance machine changes its designated forward direction to a reverse direction.

In commenting on the proposed rule, Loram stated that some machines, by their work function on the track, move back and forth at intervals so short that their change-of-direction alarms would sound almost continually while they are performing track work. Such a result could effectively hamper the safety of track work rather than enhance it. In

response to this comment, FRA has added language to paragraph (b) permitting operators of such machines to interrupt or turn off the change-of-direction alarms on those machines when they are performing functions that would cause the alarms to sound constantly or almost constantly.

Nevertheless, FRA has not found it possible to specify a precise list of machines that would typically fit these criteria. Therefore, FRA has added a sentence to paragraph (b) to indicate that FRA will presume that all machines must engage their change-of-direction alarms, unless the employer can show that the alarm on a particular machine would sound constantly or almost constantly while the machine is performing its work function. Of course, the employer has to make such a showing only in the event that FRA inquires about a particular machine.

In developing the requirement as to how loud the audible warning devices and change-of-direction alarms must be, the Task Group rejected proposing a decibel standard, choosing instead to propose simply that the warning devices be "loud enough to be heard by roadway workers and other machine operators within the immediate work area." However, FRA invited comment on whether or not the requirement should specify a particular decibel level, and if so, what level. Two commenters, AAR and Loram, stated that a standard decibel level would remove flexibility needed to address varying noise levels in different situations. Transtar disagreed, however, stating that the varying sound levels of different warning devices could result in excess noise and confusion for the work crews, especially as machines repeatedly change direction to perform their functions, and employees may ignore the warning alarms if they hear them all day long. Transtar also noted that the proposal did not specify minimum distances at which the audible warning devices need to be heard, or whether different tones should be used to help employees distinguish between different machines.

After discussing the comments, the Task Group concluded that different work situations require different decibel levels for the audible warnings and recommended that the language of the final rule not specify a decibel level for these warning devices. FRA agrees with the Task Group's reasoning and also notes that no comment was received recommending what decibel level(s) should be set. Accordingly, the final rule does not specify any decibel level(s). In regard to the concern that the rule may lead to excessive noise and

confusion for work crews, the final rule provides, as noted above, that change of direction alarms may be interrupted by the machine operator when operating a machine in the work mode if the function of the machine would result in a constant, or almost constant, sounding of the device.

#### *Section 214.513 Retrofitting of Existing On-Track Roadway Maintenance Machines; General*

This section specifies a schedule of retrofit items applicable to all existing on-track roadway maintenance machines. Pursuant to § 214.7, an *existing* on-track roadway maintenance machine is defined as any on-track roadway maintenance machine other than a new on-track roadway maintenance machine. Consequently, an *existing* on-track roadway maintenance machine is any on-track roadway maintenance machine in existence or on order on or before December 26, 2003, or completed on or before September 27, 2004.

Paragraph (a) states that each roadway worker transported on an existing on-track roadway maintenance machine shall have a safe and secure position that also provides protection from moving machine parts that could entangle clothing or body extremities. These positions may include seats or foot platforms with handholds so that the roadway worker can maintain a stable and balanced position on the machine as it is moving down the track. Roadway workers are prohibited from being transported on machines on which it is not possible to provide safe and secure positions for them. In the final rule, FRA notes that it has modified paragraph (a) in the same way it has modified § 214.507(a)(2) to make clear that moving parts of the machine which could entangle clothing or body extremities are not located only inside of the cab. *See* discussion of § 214.507(a)(2), above.

In the NPRM, FRA proposed requiring in paragraph (b) that each existing machine be stenciled or have documentation on the machine to clearly identify the location of safe and secure positions for the machine operator and any roadway workers transported on the machine. In the final rule, that requirement has been revised from the NPRM and re-designated as § 214.518. Discussion of this revised requirement is included under the heading for that section in this portion of the preamble, below.

In paragraph (b) of the final rule, formerly paragraph (c) of the proposed rule, each existing on-track roadway maintenance machine is required to

have a permanent or portable horn or other audible warning device by March 28, 2005. The audible warning device shall be easily accessible to the machine operator and shall produce a sound loud enough to be heard by roadway workers and other machine operators within the immediate work area.

As in the case of the similar requirement for new on-track roadway maintenance machines in § 214.511, the Task Group recommended not setting a decibel standard to address how loud the audible warning devices on existing roadway maintenance machines must be. In addition, comments received in response to the proposed requirement were the same as those received in response to § 214.511. Consequently, this paragraph's requirements are the same as those proposed in the NPRM.

Paragraph (c), formerly paragraph (d) in the proposed rule, states that by March 28, 2005, each existing on-track roadway maintenance machine shall be equipped with a permanent illumination device, such as a headlight, or a portable light source securely placed on the machine and not hand-held. The portable light does not have to be permanently affixed to the vehicle, however. FRA will consider the light source to be securely placed on the machine if it is held in place through any arrangement of screws, bolts, mounting clips, or heavy-duty magnets that maintains the light steadily in place without requiring a person to hold it. Lights are required if the machine is operated during the period between one-half hour after sunset and one-half hour before sunrise or in dimly lit areas such as tunnels. The illumination device or portable light source must be capable of illuminating obstructions on the track ahead for a distance of at least 300 feet under normal weather and atmospheric conditions.

The regulation affords employers up to twenty months after the date of publication of the final rule to retrofit existing on-track roadway maintenance machines with audible warning and illumination devices on those machines not so equipped. This is sufficient time for employers to order these safety appurtenances and fit them on machines not so equipped, and FRA expects all machines to be in compliance by the retrofit date.

#### *Section 214.515 Overhead Covers for Existing On-Track Roadway Maintenance Machines*

This section addresses the reinstallation and maintenance of overhead covers on existing on-track roadway maintenance machines, as well as the feasibility of providing overhead

covers on certain machines not originally designed and manufactured with such protection.

Paragraph (a) states that for those existing on-track roadway maintenance machines either currently or previously equipped with overhead covers for the operator's position, defective covers shall be repaired, and missing covers shall be reinstalled, by March 28, 2005, and thereafter maintained in accordance with the provisions of § 214.531. FRA has modified the text of this paragraph from that proposed in the NPRM. In the NPRM, FRA proposed that "[o]verhead covers on existing on-track roadway maintenance machines will be repaired by \* \* \* and thereafter maintained in accordance with the provisions of § 214.531." FRA has clarified the text by stating what had been implicit: a cover does not have to be repaired if it is not defective. Further, FRA has made clear that if a machine has previously been equipped with an overhead cover that has since been removed, that cover must be reinstalled. In addition, FRA has made clear that the cover is for the operator's position. FRA believes that this paragraph more accurately reflects the intent of the Task Group as it has been revised.

Many older on-track roadway maintenance machines were not designed with overhead covers, although machine operators could greatly benefit from their presence. Paragraph (b) allows an operator assigned to operate a particular on-track roadway maintenance machine, or that operator's designated representative, to request in writing that the employer evaluate the feasibility of providing an overhead cover for the operator's position where original design specifications did not provide for one or where the overhead cover was an option that was not purchased. Under paragraph (b), the employer must respond in writing within 60 days to each such request.

If the employer finds that the addition of an overhead cover is not feasible for a particular machine, the written response must state why. There may be a number of reasons why an employer would find that the addition of an overhead cover is not feasible. There may be no room on the machine to install an effective cover or canopy to protect the operator's position, or the machine may not provide a safe place on which a cover may be mounted or attached. Employers must proceed with caution in retrofitting a cover that is supported by an additional pole or stanchion. A roadway worker may try to use a stanchion as a handhold, depending on its location.

Consequently, if a stanchion is in a location identified as a safe and secure location for a roadway worker to ride on the machine, the stanchion must be securely attached to the machine so that it may serve as a handhold.

In preparing the final rule, FRA has modified the text of paragraph (b) from that proposed in the NPRM to make the requirement clearer and consistent with the changes made to paragraph (a), noted above.

As provided in paragraph (c), for purposes of this section the covers or canopies must be capable of shielding the operator from overhead sunlight, but are not expected to offer complete protection from the sun when the sun is relatively low in the sky, soon after sunrise or just before sunset. The covers must also be capable of shielding the operator from ordinary rainfall or snowfall, but are not expected to shield the operator from the effects of windblown precipitation. For clarity, FRA has added paragraph (c) to place in the rule text what FRA had proposed the covers protect against, as stated in the preamble discussion in the NPRM. In addition, FRA has used the same rule text contained in § 214.505(h), which is the counterpart to this section for new on-track roadway maintenance machines.

*Section 214.517 Retrofitting of Existing On-Track Roadway Maintenance Machines Manufactured on or After January 1, 1991*

This section specifies requirements for existing on-track roadway maintenance machines manufactured on or after January 1, 1991. Consequently, on-track roadway maintenance machines manufactured prior to 1991 are exempt from these requirements. Existing on-track roadway maintenance machines that are subject to the requirements of this section must conform to these requirements after March 28, 2005. As a result, such machines that are not already equipped with the safety appurtenances required by this section must have those appurtenances installed and comply with the other requirements of this section after this date.

Under paragraph (a), existing on-track roadway maintenance machines covered by this section must have a change-of-direction alarm, or rearview mirror or other rearward viewing device, if adding the device is feasible from an engineering standpoint and promotes operational safety. Among the wide variety of roadway maintenance machines, there exist some machines for which such a retrofit would be useless, unnecessary, impossible, or impractical.

Under this regulation, the feasibility and usefulness of retrofitting a change-of-direction alarm or rearward viewing device to a particular roadway maintenance machine will be determined by the employer after considering available compliance options and the durability and functional quality of the proposed retrofit.

A change-of-direction alarm notifies workers near the roadway maintenance machine that its movement is about to change. A rearward viewing device assists the operator in safeguarding roadway workers in the vicinity of the machine. Both devices offer protection for roadway workers, but from two different perspectives. In the NPRM, FRA sought comment regarding whether this standard should require both a change-of-direction alarm and a rearward viewing device in order to afford adequate protection for roadway workers working in the vicinity of a roadway maintenance machine. The BMWV responded that a requirement for both devices would offer roadway workers a higher level of protection. The AAR noted that installation of a rearward viewing device may be impracticable on some older machines and, in particular, that some older machines may not have the proper electrical system to sustain a change-of-direction alarm. According to the AAR, by requiring either one device or the other, rather than both, the rule would provide employers with the kind of flexibility they may need in retrofitting old machines. The AAR also stated that either device by itself would provide an adequate level of protection for roadway workers.

Loram commented that the proper choice of either a rearward viewing device or a change-of-direction alarm, or both, depends on the particular machine. For example, Loram believed that rearward viewing devices would be of little use on large machine consists in protecting workers alongside the machines. Loram also stated that automatic change-of-direction alarms may not work on large machine consists in protecting workers alongside the machines or on certain roadway maintenance machines, such as ballast vacuum machines, which, by the nature of the work they do, move back and forth on the track at very short intervals. A change-of-direction alarm would sound almost constantly on such a machine.

The Task Group recommended that FRA add language to the regulation that would exclude certain machines for which change-of-direction alarms and rearward viewing devices would make

no safety sense. FRA agrees that such an exclusion is reasonable, and as explained further the final rule includes the caveat that a change-of-direction alarm or rearward viewing device needs to add some value to the operational safety of the machine, given its function on the roadway. In other words, an employer does not have to retrofit an existing on-track roadway maintenance machine with either a change-of-direction alarm or a rearward viewing device if the machine's design or function is such that a retrofit of this nature would provide no safety value. However, FRA will presume that all existing on-track roadway maintenance machines may be retrofitted with either device in such a way that safety is enhanced. An employer who reaches a different conclusion about retrofitting a particular machine will have to demonstrate, if asked by FRA, that such a retrofit would not improve safety.

Under paragraph (b), an existing on-track roadway maintenance machine covered by this section must also have an operative heater when the ambient temperature is less than 50 degrees Fahrenheit, if the machine is or has been equipped with a heater. Roadway workers typically dress in seasonal clothes appropriate to perform work outdoors, unlike locomotive cab employees who expect to spend most of the workday inside the cab of a locomotive. Therefore, the threshold ambient temperature may be as low as 49 degrees Fahrenheit before triggering the requirement for an operative heater in a roadway maintenance machine.

In preparing the final rule, FRA modified the text of paragraph (b) to make clear that this requirement applies to machines that have previously been equipped with heaters that have since been removed. Heaters that have been removed must be reinstalled. Further, FRA has removed the text that limited the application of this section to heaters equipped by the manufacturers of the on-track roadway maintenance machines. Heaters could have been installed after the machines were manufactured, and it is not evident why heaters installed after manufacturer should not be subject to the requirements of this paragraph.

Paragraph (c) requires that the light weight of an existing on-track roadway maintenance machine covered by this section be stenciled or otherwise clearly displayed on the machine, if the light weight is known. The light weight of a machine is calculated when the machine is not loaded with passengers or extraneous equipment not part of the machine itself. It should be displayed in a conspicuous location on the machine.

The light weight will identify the machine's proper category for the purposes of this regulation, as well as provide essential information to crane operators in the event the machine is lifted on to—or loaded off of—a flatbed truck or rail car for movement from one work site to another. FRA received no comment on the proposed requirement; therefore, paragraph (c) remains as proposed.

Paragraph (d) requires existing on-track roadway maintenance machines covered by this section to be retrofitted with operable brake lights or other reflective devices or material, if not already so equipped. The purpose of this requirement is to enhance the visibility of a machine to operators of other machines and to other rail traffic. FRA received no comment on the proposed requirement; therefore, paragraph (d) remains as proposed.

Paragraph (e) of the NPRM proposed that existing on-track roadway maintenance machines covered by this section be equipped with safety glass when glass is normally replaced on the machines. Because there may be a large number of existing roadway maintenance machines that do not have safety glass, FRA's approach in this paragraph is to enhance the safety of the roadway maintenance machines without creating an onerous burden in retrofitting such existing machines with safety glass. It is not the intent of the regulation to require employers to immediately replace all the glass on all existing machines covered by this section. Rather, the existing glass may remain in place until such time as it would normally be replaced, and then it must be replaced with safety glass. However, if the employer has on hand as of the effective date of this rule replacement glass that is other than safety glass and is specifically intended for use on these machines, the employer may utilize the supply of that replacement glass until it is exhausted.

Although the proposed rule did not specify standards for safety glass, FRA requested comment as to whether the final rule should include specific standards, such as requirements similar to those delineated in 49 CFR part 223 (Safety Glazing Standards) for passenger rail cars, locomotives, and cabooses. Commenters responding to this request were unanimous in believing that this final rule should not require standards similar to those contained in the Safety Glazing Standards. The AAR and Loram suggested that if any safety glass standards were set, or recommendations made, they should be restricted to automotive safety glass or its equivalent, such as Lexan. The AAR pointed out

that not all roadway maintenance machines have the structural strength to accommodate the type of glass required under 49 CFR part 223. The BMW concurred, stating that a similar OSHA standard at 29 CFR 1926.600(a)(5) requires safety glass "or equivalent." The BMW also stated that manufacturers likely follow ANSI recommendations for safety glass. After discussing these comments, the Task Group recommended that FRA not change the requirement as proposed in the NPRM. FRA has elected to follow that recommendation and paragraph (e) remains as proposed. As noted, OSHA has a similar requirement that is no more specific, and FRA does not believe that additional requirements are necessary at this time.

Paragraph (f) of the proposed rule stated that an existing roadway maintenance machine covered by this section that is equipped with a turntable must have a turntable restraint device, such as an arrangement of pins and hooks designed to prevent an undesired lowering of the turntable device, or a warning light that would indicate to the machine operator that the turntable device is not in a normal travel position. In commenting on this proposal and its counterpart for new on-track roadway maintenance equipment in § 214.507, Loram stated that the proposed rule neglected to address other types of roadway maintenance equipment that may also encroach on the track area below the rail. As explained above in the discussion of § 214.507, FRA has not adopted Loram's comment. Yet, as a separate matter, FRA has revised paragraph (f) to make clear that the paragraph applies only to those machines equipped with turntables.

In paragraph (g) of the NPRM FRA proposed to require handholds, handrails, or a secure seat or bench for each roadway worker transported on an existing roadway maintenance machine subject to the requirements of this section. FRA also noted that it was considering specifying regulatory standards for these handholds, handrails, seats and benches, and sought comment on the need for such additional standards. None of the commenters favored the addition of such standards. The AAR stated that the wide variety of roadway maintenance machines would make it very difficult to design standards suitable for all machines, and that standards for handholds and other such safety appliances on freight cars would not be appropriate because roadway maintenance machines are typically constructed of much thinner metal. Without stating a belief that such

standards are necessary, Loram pointed out that OSHA has standards defining a good handhold or handrail, but noted that they are vague about the best means of attachment. Separately, the BMW commented that a safe and secure position should have a minimum of three points of contact for each roadway worker riding on a roadway maintenance machine. An example of three-point contact is two feet securely positioned and one hand on a structurally sound handhold or handrail.

FRA has examined whether OSHA's regulations provide a definition of what is a good handhold or handrail for application to the requirements of this paragraph. OSHA regulations do address handrails for various work sites. However, FRA does not believe it appropriate at this time to refer to any specific OSHA regulation for application to this paragraph, and, in light of the comments received in response to this section, the paragraph remains unchanged.

#### *Section 214.518 Safe and Secure Positions for Riders*

In discussing the NPRM and the comments received on it, the Task Group noted that while § 214.513(b) of the NPRM proposed requiring employers to stencil or document the safe and secure positions for roadway workers to ride on *existing* roadway maintenance machines, no such requirement was expressly proposed for new machines. Consequently, the requirement proposed as § 214.513(b) in the NPRM has been moved here so that it may apply to any on-track roadway maintenance machine, new or existing.

Some members of the Track Working Group suggested that a systemwide operating rule prohibiting the transport of roadway workers on certain roadway maintenance machines, rather than stenciling or documentation, could serve as a more effective and efficient means of conveying information as to when it is prohibited to transport roadway workers on roadway maintenance machines. FRA expressly invited comment on this suggestion in the NPRM.

The BMW responded to the request for comment by stating that employers should not be given the option of using an operating rule to identify those roadway maintenance machines prohibited from transporting roadway workers because it would create too great a potential for error in its application. According to the BMW, the wide variety of types and configurations of roadway maintenance machines would cause confusion about

the proper application of a broad operating rule, especially for roadway workers encountering a particular machine with which they are unfamiliar. In addition, the BMW stated that roadway workers do not have instant or easy access to operating rules, in case a question arises about the applicability of such a rule to a particular machine.

The AAR stated that stenciling and documentation could be overlooked easily by busy roadway workers. According to the AAR, a more effective way to address the issue would be for the employers to emphasize training of employees as to operating rule restrictions on roadway maintenance machines. Transtar agreed with the AAR, as did Loram, which cautioned that an operating rule should also specify the speeds and distances workers are permitted to be transported.

In extensive discussion about the language of the proposed rule and the comments received in response to the proposal, the Task Group noted that the rule as proposed would have required that all existing roadway maintenance machines be stenciled or documented, even if the stenciling and documentation merely stated, "No riders." The Task Group concluded that a simpler way to reach the same result would be for the regulation to prohibit roadway workers, other than the machine operator(s), from riding on roadway maintenance machines (new and existing) unless the machines were stenciled or documented with information about the safe and secure riding positions.

FRA has elected to adopt the Task Group's suggestion by adding this new section to indicate this prohibition. Under the new language, employers need only identify those machines intended to carry roadway workers, in addition to the machine operator(s), by stenciling, marking, or other written notice on the machines. Roadway workers, for their part, will know that they are prohibited from riding on a machine unless it has the required stenciling, marking, or other written notice. Any employer who allows its roadway workers to ride on a roadway maintenance machine that has neither stenciling, marking, nor other written notice identifying safe and secure riding positions will be deemed in violation of the regulation.

Under § 214.513(b) as proposed, employers would have had to document or stencil each and every existing roadway maintenance machine to indicate whether riders would be permitted on each machine and, if so, where the safe and secure positions

were located. The proposed rule afforded employers one year from the effective date of the final rule to accomplish this requirement. Under this final rule, however, the requirement is less burdensome, with stenciling, marking, or other written notice required only for those machines permitted to transport riders. FRA therefore has concluded that the additional one-year interval for compliance is not necessary. This requirement becomes effective on the effective date of this final rule, and any machine that is not stenciled, marked, or otherwise has written notice indicating it can accept riders will not be permitted to carry riders until that indication is in place.

FRA notes that in preparing the final rule it has clarified how the safe and secure position on each machine will be identified. The rule text provides that each such position shall be identified by "stenciling, marking, or other written notice on the machine," instead or stating by "stenciling or documentation on the machine" as proposed in the NPRM. FRA believes that the proposed language could possibly have been too restrictive in limiting the manner in which a safe and secure position is identified. FRA makes clear that a safe and secure position may certainly be identified by documentation on the machine, but such a position may also be identified by other written notice on the machine.

#### *Section 214.519 Floors, Decks, Stairs, and Ladders for On-Track Roadway Maintenance Machines*

All new and existing on-track roadway maintenance machines shall have floors, decks, stairs, and ladders that are of appropriate design. The purpose of this requirement is to provide secure footing for the machine operator and any roadway workers transported on the machine. Current industry standards specifying material such as diamond plate, rubber tile, or other slip-resistant material design will be considered appropriate for the purposes of this regulation. Accumulations of oil, grease, or other contaminants or obstructions that could create a slipping, falling, or fire hazard must be promptly removed from floors, decks, stairs, and ladders.

FRA received no comment on this section in the NPRM; therefore, the language of the final rule remains as proposed.

*Section 214.521 Flagging Equipment for On-Track Roadway Maintenance Machines and Hi-Rail Vehicles*

This section requires that flagging kits be available when on-track roadway maintenance machines and hi-rail vehicles are operated over trackage subject to a railroad operating rule requiring flagging. Flagging kits must comply with the requirements specified in the operating rules of the railroads over which the equipment is operated. This requirement applies to each on-track roadway maintenance machine and hi-rail vehicle that is operated alone or as the leading or trailing piece of equipment in a roadway work group operating under the same occupancy authority. Flagging kits are not required for roadway maintenance machines and hi-rail vehicles that are operated in the middle of a single roadway work group. However, the vehicles must be under the same occupancy authority to be considered part of a single group.

In commenting on the proposed rule, Transtar inquired whether employers are already required to equip roadway maintenance machines with flagging kits under the Roadway Worker Protection regulations in subpart C of this part. FRA notes that flagging kits required under this final rule are for operating rule purposes only and do not relate to any requirements under the Roadway Worker Protection regulations in subpart C. FRA received no other comments on this section; therefore, the language of the section remains as proposed.

*Section 214.523 Hi-Rail Vehicles*

This section prescribes certain inspection and record keeping requirements for all hi-rail vehicles, new as well as existing. It also prescribes specific requirements applicable only to new hi-rail vehicles.

By definition, hi-rail vehicles have retractable flanged wheels giving them the ability to operate over the general highway system as well as on railroad track. Operation of these vehicles over the general highway system requires them to be manufactured to meet Federal motor vehicle safety standards.

Paragraph (a) requires that all hi-rail vehicles have the safety-critical components of their hi-rail gear inspected at least once per year. At a minimum, pursuant to this inspection requirement, tram, wheel wear and gage measurements must be checked and adjusted, if necessary, to provide for continued safe operation. This requirement is not necessarily intended to coincide with a calendar year, January to December. Further, FRA has

added language to this final rule that allows up to 14 months between annual inspections. What this means is that the first annual inspection of all existing hi-rail vehicles is due under this rule within one year from the effective date of this final rule. Thereafter, the inspection of such existing hi-rail vehicles comes due each year on the anniversary date of its first inspection required under this rule. However, employers are allowed up to a two-month window in which to perform the inspection once it becomes due. As new hi-rail vehicles enter service, the inspection required by this paragraph is due within one year of the date the vehicles enter service. Thereafter, the inspection of such new hi-rail vehicles comes due each year on the anniversary date of the first inspection required under this rule. Again, employers are allowed up to a two-month window in which to perform the inspection once it becomes due. Any hi-rail vehicle that has not received an annual inspection within the previous 14 months will be deemed in violation of this paragraph.

Wisconsin Central provided the only comment on this paragraph. The operator of Class II and Class III carriers in the Midwest stated that the requirement for an annual inspection of hi-rail vehicles is unnecessary because most such vehicles are assigned to one employee who knows the vehicle and immediately notices when a defect develops. The Task Group disagreed that this requirement is burdensome to railroads and it further noted that the Task Group discussed the provision at length when the proposed rule was being developed. The Group recommended that the language in the final rule remain as proposed. FRA believes that the inspection requirement is necessary as a minimum requirement to provide for the safety of hi-rail vehicles, and has not adopted the Wisconsin Central's comment.

Paragraph (b) specifies a record keeping requirement to document safety inspections. Records may be retained on paper forms devised by the employer, or they may be stored electronically in a computer database. The employer must maintain the record of the last inspection of each vehicle until the next inspection is performed. The employer may choose to keep the record on the hi-rail vehicle itself or at a designated location. In either case, the records must be made available for inspection and copying during normal business hours by representatives of FRA and States participating under part 212 of this chapter.

The requirements specific only to new hi-rail vehicles are contained in

paragraph (c). Each new hi-rail vehicle shall be equipped with an automatic change-of-direction alarm or backup alarm which produces an audible signal that is at least three seconds long and uniquely distinguishable from any surrounding noise. Paragraph (c) does not specify what particular decibel level is required for the change-of-direction or backup alarms on new hi-rail vehicles. In the preamble of the NPRM, FRA proposed that these devices be "loud enough to be heard by roadway workers and other machine operators within the immediate area." Noting in the NPRM that such a standard could invite too many variables, making it difficult for FRA to enforce, FRA requested comment as to whether or not a decibel standard should be required for these devices, and, if so, what that decibel level should be. Consistent with §§ 214.511 and 214.513, the Task Group recommended not setting a decibel standard to address how loud the audible warning devices on new hi-rail vehicles must be, and comments received on this paragraph were the same as those for the other sections cited. As in those other sections, the language of this paragraph in the final rule is the same as that proposed in the NPRM.

Paragraph (c)(2) requires each new hi-rail vehicle to be equipped with an operative warning light or beacon mounted to the roof of the vehicle. The light or beacon must be designed to flash intermittently while rotating 360 degrees or otherwise emitting light in a 360-degree field.

In the NPRM, FRA requested comment about whether or not the final rule should specify a color for the warning light and, if so, what color would be appropriate. In response, the BMWV noted that orange would be an appropriate color for warning lights on hi-rail vehicles because it is the color associated with "caution." The BMWV suggested that if no color is specified, the final rule should require that equipment warning lights be uniform for each railroad. The AAR responded that the rule need not specify a color for hi-rail vehicle warning lights. According to the AAR, some lights cannot display colors as well as others, and sometimes railroads find the use of two colors to be more effective. The AAR believed that the rule should allow the marketplace to experiment and determine which color(s) would work best. In addition, Loram suggested the following specific colors to correspond to the following specific functions: blue would signify "parked"; yellow would signify "operating"; white would designate "front"; and red would designate "rear."

FRA has elected not to change the language of this paragraph from that in the proposed rule. The agency could detect no clear consensus among the commenters about which color(s) would work best. Different railroads utilize different colors. FRA can point to no clear safety benefit from a new requirement that would force railroads to change a large number of light bulbs.

Paragraph (d)(1) requires the operator of each hi-rail vehicle to inspect the vehicle for compliance with this subpart prior to using the vehicle at the start of the operator's work shift. The intent of the inspection of hi-rail equipment prior to use is to identify a condition that inhibits the safe operation of the vehicle. For hi-rail vehicles that are in constant use, such as during a construction project, it is expected that each designated employee at the beginning of his or her shift will inspect the hi-rail gear. If multiple employees use the same equipment during the same work shift, it is expected that only the first employee will inspect the equipment for that shift.

In preparing the final rule, FRA recognized that this paragraph did not expressly cover the inspection of existing hi-rail vehicles. Yet, it is not evident to FRA why only new hi-rail vehicles should be made subject to an inspection requirement for compliance with this subpart. Consequently, FRA has modified the rule to make clear that existing hi-rail vehicles must be inspected for compliance with this subpart, such as checking for flagging kits when required by § 214.521. FRA would also expect that a hi-rail vehicle operator conduct at least a visual inspection following a derailment or accident involving the hi-rail vehicle to ensure that the vehicle remains safe to operate.

In commenting on the NPRM, Transtar noted that the paragraph included no requirement for recording the performance of these inspections. Although Transtar's observation is accurate, the omission was deliberate. FRA believes that the chief purpose of a requirement for keeping records of these checks of hi-rail vehicles would be to strengthen the enforceability of this paragraph. In this regard, paragraph (d)(2) requires that each non-complying condition not immediately repaired following an inspection be tagged and reported to the employer's designated official. (Paragraph (d)(2) was formerly proposed as paragraph (e) in the NPRM.) If FRA finds a hi-rail vehicle operating with a non-complying condition that has not been properly tagged or reported, FRA will presume that the hi-rail has not received a proper inspection

prior to operation that shift, unless the operator or employer can show that the defect developed after the inspection was performed. FRA believes that this presumption will provide the agency with adequate ability to enforce the provisions of the paragraph without further burdening the employer with daily record keeping requirements.

This same rationale underlies the requirements of § 214.527. Section 214.527 requires a pre-work inspection of roadway maintenance machines and the tagging and reporting of any discovered defects, but no record keeping of the inspections themselves. Of course, nothing in this paragraph or in § 214.527 prohibits an employer from maintaining records of these inspections for its own purposes.

Paragraph (d)(3) states that defective automatic change-of-direction or backup alarms and 360-degree intermittent warning lights or beacons must be repaired or replaced as soon as practicable within seven calendar days. This paragraph is consistent with § 214.531, and was formerly proposed as paragraph (f) in the NPRM.

#### *Section 214.525 Towing With On-Track Roadway Maintenance Machines or Hi-Rail Vehicles*

This section prescribes the manner in which on-track roadway maintenance machines or hi-rail vehicles may be used to tow pushcars or other on-track maintenance-of-way equipment. Paragraph (a) specifies that whenever an on-track roadway maintenance machine or hi-rail vehicle is used to tow such equipment, it must be equipped with a towing bar or other coupling device designed for that purpose that provides a safe and secure attachment.

The towing of pushcars or other on-track maintenance-of-way equipment is prohibited under paragraph (b) when it would exceed the braking capabilities of the on-track roadway maintenance machine or hi-rail vehicle doing the towing. When determining whether or not the braking capability of a machine or vehicle would be exceeded, the employer must consider the track gradient or slope in the area, as well as the number and weight of pushcars or other equipment to be towed. Paragraph (b) does not cover locomotives hauling conventional rail cars used in track maintenance work, such as ballast cars. Such locomotives must comply with the requirements in 49 CFR part 229 (Railroad Locomotive Safety Standards).

Transtar commented that the requirement for towing equipment under this section would force railroads to keep multiple towing apparatuses for towing different types of equipment.

Transtar suggested that the final rule provide some relief from the requirements of this section for towing performed on an emergency basis, such as by including an exception that under emergency circumstances equipment may be towed by any safe method. In considering this comment, the Task Group believed that the language of this section is general enough to adequately cover all types of towing situations, including emergency situations. FRA agrees, and the text of the final rule remains as proposed.

#### *Section 214.527 On-Track Roadway Maintenance Machines; Inspection for Compliance and Schedule for Repairs*

This section prescribes the manner in which on-track roadway maintenance machines are to be inspected and repaired. The title of this section has been modified to make clear that it applies only to on-track roadway maintenance machines.

Paragraph (a) requires the operator of an on-track roadway maintenance machine to perform an inspection of that machine for compliance with the requirements of this subpart. The operator must perform the inspection prior to using the machine at the start of the operator's work shift. As is the case for the inspection of hi-rail vehicles pursuant to § 214.523, if multiple employees use the same equipment during the same work shift, it is expected that only the first employee will inspect the equipment for that shift.

Under paragraph (b), any non-complying condition that cannot be immediately repaired must be tagged and dated according to established employer procedures and reported to the designated official. As in § 214.523, this section does not require an employer to maintain records of each daily inspection. However, should FRA find an on-track roadway maintenance machine operating with a defect that has not been properly tagged or reported to the employer's designated official, FRA will presume that the daily inspection was not properly performed—a presumption the employer or operator may rebut by showing that the defect occurred after the inspection was performed.

Paragraph (c) allows for the continued operation of an on-track roadway maintenance machine with a reported non-complying condition subject to certain requirements:

(1) A machine with non-complying headlights or work lights may be operated only between the period from one-half hour before sunrise to one-half hour after sunset for no more than seven calendar days. In other words, it may



not be operated during the darkness between sunset and sunrise. The thirty-minute periods both before sunrise (dawn) and after sunset (dusk) are thought to provide enough light for safe operation on a temporary basis.

(2) A portable horn may be substituted for a non-complying or missing horn or other audible warning device for no more than seven calendar days.

(3) A temporary, portable fire extinguisher that is readily available for use may replace a missing, defective, or discharged permanent fire extinguisher on a new on-track roadway maintenance machine for no more than seven calendar days, after which time the permanent fire extinguisher must be replaced or repaired.

(4) Non-complying change-of-direction alarms or backup alarms, and 360-degree intermittent warning lights or beacons, shall be repaired or replaced as soon as practicable within seven calendar days.

(5) A structurally defective or missing operator's seat shall be replaced or repaired within 24 hours, or by the start of the machine's next tour of duty, whichever is later. This paragraph provides flexibility for the employer in cases such as where the operator's seat is found to be defective on a Thursday afternoon and the next tour of duty for that machine is not scheduled until the following Monday. If the operator's seat becomes defective during the machine operator's tour of duty, the machine may be operated for the remainder of the operator's duty tour only if it is determined that the operation may continue in a safe manner.

In commenting on the proposed rule's requirement for repairs to be made within seven calendar days, Transtar suggested that the provision should be changed to require repairs to be made within seven working days to allow employers adequate time to contact suppliers and perform the work around weekends and holidays. The Task Group considered this comment and recommended that the language of this section remain the same as that in the proposed rule. The provisions in this section were discussed at length by the Task Group when the proposed rule was being developed, and the resulting proposal was endorsed by the RSAC. FRA does not believe that this requirement is burdensome for the railroad industry, and has not modified the final rule in response to Transtar's comment.

#### *Section 214.529 In-Service Failure of Primary Braking System*

Paragraph (a) states that in the event of a total in-service failure of an on-track roadway maintenance machine's primary braking system, the machine may be operated for the remainder of its tour of duty through the use of a secondary braking system, if the machine is so equipped, or by coupling to another on-track roadway maintenance machine. In either case, the employer must determine that continued operation of the machine is safe.

In the NPRM, FRA stated that it was considering adding to this section criteria to be used by the employer in determining the safety of continuing to use an on-track roadway maintenance machine after its primary braking system has experienced a total in-service failure. FRA sought comment about the need for such criteria and what the criteria should include. The AAR was the only commenter to respond to this request. The railroad organization stated that the judgment as to the safety of the machine's continued operation is best left to the employer in the situation and that more specific criteria is not required. FRA therefore has decided that the language in this paragraph of the final rule should remain as proposed in the NPRM.

Paragraph (b) states that in the event of a total in-service failure of an on-track roadway maintenance machine's primary braking system, when no secondary braking system is available and no other machine is available for coupling, the machine may, if it is determined to be safe to do so, travel to a clearance or repair point where it shall be placed out of service until repaired. The BMW observed in its comments on the proposed rule that this provision would permit a roadway maintenance machine to be operated to a clearance or repair point with no braking system whatsoever. FRA notes, however, that the machine may be moved only if it is determined that such movement can be done safely. For instance, the wings and broom on a ballast regulator or the rail clamps on a tamping machine could be used to slow or stop the machine, if the operator determines that it is safe to do so in his or her particular situation. A roadway machine operator operating a machine with failed brakes may, in accordance with § 214.503, challenge in good faith the safety of any instruction to move the machine to a clearance or repair point. The good-faith challenge provision should provide the machine operator protection from an improper order by the employer to operate a

machine that has no braking capability when it is unsafe to do so.

#### *Section 214.531 Schedule of Repairs; General*

This section specifies a general schedule of repairs for all on-track roadway maintenance machines and hi-rail vehicles. If an on-track roadway maintenance machine or hi-rail vehicle does not meet all of the requirements of this subpart, it shall be repaired as soon as practicable within seven calendar days.

More restrictive requirements for repairs to on-track roadway maintenance machines apply to missing or defective operator seats as prescribed in § 214.527(c)(5), and a total in-service failure of a primary braking system as prescribed in § 214.529. In the event a part necessary for the repair of a non-complying on-track roadway maintenance machine or a hi-rail vehicle is not in the employer's inventory and must be ordered, the repair schedule is governed by the requirements specified in § 214.533, which addresses the availability of repair parts.

FRA has modified the rule text in this section to make clear that it applies to both existing and new hi-rail vehicles. This is consistent with the preamble discussion of this section in the NPRM, which made no distinction between existing and new hi-rail vehicles. Further, this subpart imposes requirements on existing hi-rail vehicles. For example, § 214.521 requires hi-rail vehicles to have flagging kits as specified in that section, and makes no distinction between whether the machine is new or existing.

In commenting on the NPRM, Transtar observed that this section requires hi-rail vehicles to be removed from service if non-complying conditions are not repaired within seven days. Noting that hi-rail vehicles are frequently used off the track, Transtar suggested that the language of the rule specify that the hi-rail should be removed from track service only, since the defect may not prevent the vehicle from being safely used off the track. FRA notes that the requirements of this rule apply to roadway maintenance machines as they are used for on-track maintenance; they do not apply to service performed by the machines in another capacity off the track. To clarify this point, FRA has followed Transtar's suggestion and revised this section to read that on-track roadway maintenance machines and hi-rail vehicles must be kept out of on-track service if not repaired within seven calendar days. Consistent with this change, FRA has

modified paragraphs (b) and (c) of § 214.533, below, to read that on-track roadway maintenance machines and hi-rail vehicles not repaired in accordance with the requirements of that section must be removed from on-track service.

*Section 214.533 Schedule of Repairs Subject to Availability of Parts*

Under paragraph (a) of this section, when a part needed to repair a non-complying condition on an on-track roadway maintenance machine or hi-rail vehicle is not in the employer's inventory, the employer must order the necessary part by the end of the next business day following the report of the non-complying condition.

In commenting on the proposed rule, Transtar stated that, as long as a piece of equipment is removed from service so that it poses no risk to an operator, there should be no requirement that repair parts be ordered within a specified period of time. In declining to adopt this comment, FRA notes that the requirement to order repair parts is integral to the structure of this section, which provides flexibility to the employer, and cannot be viewed in isolation. By taking the step of ordering a necessary repair part that is not held in the employer's inventory, the employer is permitted to keep the machine or vehicle in on-track service if safe to do so until the part arrives. Thereafter, as specified in paragraph (b), below, the employer must repair the machine or vehicle within seven calendar days after receiving the necessary part(s). The employer may simply choose to remove the machine or vehicle from on-track service altogether. Yet, FRA does not intend to withdraw the flexibility provided to the employer to keep the machine or vehicle in on-track service by ordering the necessary part(s). Of course, if the employer wishes to remove the machine or vehicle from service altogether, it is free to forgo ordering a necessary repair part, and the machine or vehicle must be kept out of service until brought into compliance with this subpart, pursuant to paragraph (c), below.

FRA notes that, in preparing this final rule, it has modified the text of this section by using the term repair "part" in the singular, rather than as repair "parts" as proposed in the NPRM. The use of the word "parts" suggests that more than one part is necessary to repair each non-complying condition, which may not necessarily be the case. As modified, the rule text better effectuates FRA's intent. Further, as in § 214.531, FRA has modified the rule text in this section to make clear that the section

applies to both existing and new hi-rail vehicles.

Paragraph (b) requires the employer to repair the non-complying on-track roadway maintenance machine or hi-rail vehicle within seven calendar days after receiving the necessary part(s). However, if the non-complying condition still exists 30 days after the initial report of the condition, regardless of the reason, the employer must remove the on-track roadway maintenance machine or hi-rail vehicle from service until the condition is brought into compliance. FRA realizes that there may be times when a part needed to repair the condition is difficult or impossible for the employer to obtain. In such case the employer may continue to use the on-track roadway maintenance machine or hi-rail vehicle with a non-complying condition until the necessary part or parts are received, subject to the requirements of § 214.503. Yet, the defective machine or hi-rail vehicle must be removed from on-track service 30 days after the defect is reported, if it is still not repaired. This provision prevents the use of a defective on-track roadway maintenance machine or hi-rail vehicle for a protracted and undetermined length of time.

In commenting on the NPRM, Wisconsin Central suggested that this provision of the regulation is overly complicated and would impose an administrative burden on employers to track the arrival of replacement parts and repair dates. Wisconsin Central recommended that the provision simply state that repairs must be made within 30 days of discovery, or the on-track roadway maintenance machine or hi-rail vehicle must be removed from track service. As an alternative, Wisconsin Central suggested that the employer be given seven days to repair an on-track roadway maintenance machine or hi-rail vehicle once the part is received where the machine is located, noting that machines may break down when they are far away from their home locations.

The Task Group disagreed with both of Wisconsin Central's suggestions. The Group found that the second (alternative) suggestion is unnecessary because machine parts can be delivered overnight to most locations. Seven days is ample time within which to repair a machine once the necessary part or parts are with the employer. The Task Group further noted that the proposed provisions of this paragraph were discussed at length when the Task Group was developing the proposed rule, and the proposed rule was endorsed by the RSAC. FRA agrees with the Task Group's reasoning and has

elected not to change the rule in response to Wisconsin Central's comments.

Paragraph (c) states that if the employer fails to order a necessary repair part as required in paragraph (a) of this section, or fails to install such a repair part within seven days after receiving it as required in paragraph (b) of this section, it must remove the on-track roadway maintenance machine or hi-rail vehicle from on-track service until the equipment is brought into compliance. Of course, the equipment may continue in other service off the track, as in the case of hi-rail vehicles that may be defective for work on the track but may still operate on streets and highways.

To ensure that the provisions of this section are followed, FRA must be able to review records concerning the ordering and installation of parts necessary to repair roadway maintenance machines and hi-rail vehicles. Paragraph (d) requires the employer to maintain records for one year relating to the ordering and installation of repair parts for on-track roadway maintenance machines and hi-rail vehicles. The records must be made available to FRA and State inspectors for inspection and copying during normal business hours, yet the employer may decide how and where the records are kept. For example, the records may be kept electronically or on paper and may be stored on the machines and vehicles or in a location chosen and designated by the employer.

In commenting on the NPRM, Loram stated that the record keeping made necessary by this rule will detract from machine crews' ability to complete assigned objectives and will be costly to employers. FRA is aware of the added costs related to record keeping. However, the record keeping requirements are needed in order for FRA to enforce the rule. The additional costs created by the record keeping requirements have been factored into the cost/benefit analysis performed for this final rule. Accordingly, FRA has declined to modify the record keeping requirement in response to the comment.

*Appendix A to Part 214—Schedule of Civil Penalties*

Pursuant to 49 U.S.C. 20111, this final rule includes amendments to the penalty schedule contained in Appendix A to part 214. The amendments consist of the addition of penalties associated with violations of the regulations under new subpart D to part 214.

FRA's traditional practice has been to issue penalty schedules assigning to each particular regulation specific dollar amounts for initial penalty assessments. For each regulation, the schedule typically shows two amounts within the \$500 to \$11,000 range in separate columns, the first for ordinary violations, the second for willful violations (whether committed by railroads or individuals).

The penalty schedule constitutes a statement of agency policy, and the schedule amounts are meant to provide guidance as to FRA's policy in predictable situations, not to bind FRA from using the full range of penalty authority where extraordinary circumstances warrant. Accordingly, under this revised schedule, and regardless of the fact that a lesser amount may be shown in both columns of the schedule, FRA reserves the right to assess the statutory maximum penalty of up to \$22,000 per violation where a grossly negligent violation has created an imminent hazard of death or injury. (See Footnote 1 in appendix A to part 214.) This authority to assess a penalty for a single violation above \$11,000 and up to \$22,000 is used only in very exceptional cases to penalize egregious behavior. Where FRA avails itself of this right to use the higher penalties in place of the schedule amount, it will so indicate in a penalty demand letter.

#### Regulatory Impact/Notices

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

This final rule has been evaluated in accordance with existing policies and procedures. It is considered to be non-significant under both Executive Order 12866 and DOT policies and procedures (see 44 FR 11034, February, 26, 1979). FRA has prepared and placed in the docket a regulatory analysis addressing the economic impact of the rule. Document inspection and copying facilities are available at 1120 Vermont Avenue, NW., Seventh Floor, Washington, DC. Photocopies also may be obtained by submitting a written request to the FRA Docket Clerk, Office of Chief Counsel, Federal Railroad Administration, 1120 Vermont Avenue, NW., Mail Stop 10, Washington, DC 20590.

This rule will cost about \$1,500,000 per year. About 45 percent of that or \$675,000 per year will go into safety enhancements which serve to prevent accidents and acute injuries of the type usually reported to FRA. That portion will generate benefits of about \$1,900,000 per year. The remainder of the rule will address long-term risks like

skin cancer and chronic diseases related to silica exposure, or address event mitigation, through requiring first-aid kits and fire extinguishers. FRA does not have a good way to quantify that portion of the benefit, although existing industry practices, and the willing participation of the representatives of the railroads are substantial evidence that the burden is likely not to be very great. The almost infinite variety of equipment involved, combined with limited information collection resources and reporting detail, make it impossible to measure more accurately the problem without a substantial expenditure of resources. But in consultation with our industry partners, we have agreed that there is a risk reduction opportunity. We have, together, come up with a reasonable minimum set of precautions and measures, at a reasonable level of costs, that we believe will achieve the desired reduction in risk. Our industry partners will willingly absorb these new costs because they believe it is justified to do so.

A significant portion of the costs of environmental controls will be offset by productivity enhancements. The vast majority of new roadway maintenance machines are ordered with air conditioning because it enhances productivity. There may be some cases in which the additional productivity does not offset the cost of the environmental controls, but there will be a safety benefit in terms of reduced long term exposure to silica dust.

FRA found one fatal accident in the years 1996–2000 which would have been prevented by the rule. In that case a contract employee fell off a crane, which then rolled over him. The rule would have required a safe place to ride on the crane and likely would have prevented the fatality. See FRA accident file CFE-4–97, June, 23, 1997, Fort Worth, Texas.

##### *Regulatory Flexibility Act and Executive Order 13272*

The Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq.*) and Executive Order 13272 require a review of proposed and final rules to assess their impact on small entities. FRA has prepared and placed in the docket a Regulatory Flexibility Assessment (RFA) which assesses the small entity impact by this rule. Document inspection and copying facilities are available at the Department of Transportation Central Docket Management Facility located in Room PL-401 at the Plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC 20590. Docket material is also available for inspection

on the Internet at <http://dms.dot.gov>. Photocopies may also be obtained by submitting a written request to the FRA Docket Clerk at the Office of Chief Counsel, Federal Railroad Administration, 1120 Vermont Ave., NW., Washington, DC 20590.

“Small entity” is defined in 5 U.S.C. 601 as a small business concern that is independently owned and operated, and is not dominant in its field of operation. The U.S. Small Business Administration (SBA) has authority to regulate issues related to small businesses, and stipulates in its size standards that a “small entity” in the railroad industry is a railroad business “line-haul operation” that has fewer than 1,500 employees and a “switching and terminal” establishment with fewer than 500 employees. SBA's “size standards” may be altered by Federal agencies, in consultation with SBA and in conjunction with public comment.

Pursuant to that authority, FRA has published a policy which formally establishes “small entities” as being railroads which meet the line haulage revenue requirements of a Class III railroad. Currently, the revenue requirements are \$20 million or less in annual operating revenue. The \$20 million limit is based on the Surface Transportation Board's threshold of a Class III railroad carrier, which is adjusted by applying the railroad revenue deflator adjustment (49 CFR part 1201). The same dollar limit on revenues is established to determine whether a railroad shipper or contractor is a small entity. FRA uses this alternative definition of “small entity” for this rulemaking.

FRA took steps during the proceedings for this rulemaking to minimize the adverse effects of the rule on small entities. FRA invited the American Short Line and Regional Railroad Association (ASLRRA) to be a member of the Task Group. ASLRRA declined, securing representation by the individual also representing the AAR. It appears the rule will have a minimal effect on small entities as the overwhelming majority of roadway maintenance machines owned by small entities were manufactured before 1991, and would be exempt from most of the rule's requirements. FRA was careful to limit retrofit requirements, which might have imposed an undue burden on small entities. There appears to be no substantial impact on a significant number of small entities.

FRA sought comments on the effect of the proposed rule on small entities, but received only one comment relative to small businesses. Transtar noted that small railroads would bear an onerous

burden from the requirement in Section 214.505 that personal respiratory protective equipment be supplied to employees in the event of a failure of the environmental controls in a pressurized cab. However, this requirement does not present a new burden on small entities, as it simply mirrors OSHA regulations already in effect.

The RFA concludes that this final rule will not have a significant economic

impact on a substantial number of small entities. Thus, FRA certifies that this final rule is not expected to have a "significant" economic impact on a "substantial" number of small entities under the Regulatory Flexibility Act and Executive Order 13272.

*Paperwork Reduction Act*

The information collection requirements in this final rule have been submitted for approval to the Office of

Management and Budget (OMB) under the Paperwork Reduction Act of 1995, 44 U.S.C. 3501 *et seq.* The sections that contain the new information collection requirements for Subpart D, which will be added to those of the Railroad Workplace Safety regulations (49 CFR part 214), and the estimated time to fulfill each requirement are as follows:

CFR section	Respondent universe	Total annual responses	Average time per response	Total annual burden hours	Total annual burden cost
214.503—Good-Faith Challenges; Procedures for Notification and Resolution.	50,000 Roadway Workers.	250 notifications .....	10 minutes .....	42	\$1,428
—Resolution Procedures .....	579 Railroads .....	20 procedures .....	2 hours .....	40	1,400
214.505—Required Environmental Control and Protection Systems For New On-Track Roadway Maintenance Machines with Enclosed Cabs.	579 Railroads .....	30 lists .....	2.5 hours .....	75	2,625
—Designated Machines .....	579 Railroads .....	60 designations .....	5 minutes .....	5	175
214.507—Required Safety Equipment For New On-Track Roadway Maintenance Machines.	579 Railroads .....	1,000 Stickers .....	5 minutes .....	83	2,822
—Display of Light Weight in Conspicuous Location					
214.511—Required Audible Warning Devices For New On-Track Roadway Maintenance Machines.	579 Railroads .....	3,700 mechanisms	5 minutes .....	308	10,472
214.513—Retrofitting of Existing On-Track Roadway Maintenance Machines; General.	579 Railroads .....	2,300 mechanisms	5 minutes .....	192	6,528
—Identification of Triggering Mechanism—Horns					
214.515—Overhead Covers For Existing On-Track Roadway Maintenance Machines.	579 Railroads .....	1,050 requests + 1,050 responses.	10 minutes + 20 minutes.	525	18,200
214.517—Retrofitting of Existing On-Track Roadway Maintenance Machines Manufactured After 1990.	579 Railroads .....	6,000 stencils .....	5 minutes .....	500	17,000
214.518—Safe and Secure Position For Riders.	579 Railroads .....	7,500 stencils .....	5 minutes .....	625	21,250
214.523—Hi-Rail Vehicles—Inspections—Records.	579 Railroads .....	2,000 records .....	30 minutes .....	1,000	34,000
—Non-Complying Conditions .....	579 Railroads .....	250 tags + 250 reports.	5 min. + 15 min .....	84	2,856
214.527—On Track Roadway Maintenance Machines; Inspection for Compliance and Repair Schedules.	579 Railroads .....	550 tags + 550 reports.	5 min. + 15 min .....	184	6,256
214.533—Schedule of Repairs Subject to Availability of Parts.	579 Railroads .....	250 records .....	15 minutes .....	63	2,205

All estimates include the time for reviewing instructions; searching existing data sources; gathering or maintaining the needed data; and reviewing the information. Pursuant to 44 U.S.C. 3506(c)(2)(B), FRA solicited comments concerning: whether these information collection requirements are necessary for the proper performance of the function of FRA, including whether the information has practical utility; the accuracy of FRA's estimates of the burden of the information collection requirements; the quality, utility, and clarity of the information to be collected; and whether the burden of

collection of information on those who are to respond, including through the use of automated collection techniques or other forms of information technology, may be minimized. FRA received no replies in response to this request for comments. For information or a copy of the paperwork package submitted to OMB, contact Robert Brogan, FRA Information Clearance Officer, at (202) 493-6292.

OMB is required to make a decision concerning the collection of information requirements contained in this final rule between 30 and 60 days after publication of this document in the

**Federal Register.** Therefore, a comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication.

FRA cannot impose a penalty on persons for violating information collection requirements which do not display a current OMB control number, if required. FRA intends to obtain current OMB control numbers for any new information collection requirements resulting from this rulemaking action prior to the effective date of the final rule. The OMB control number, when assigned, will be

announced by separate notice in the **Federal Register**.

#### *Environmental Impact*

FRA has evaluated these regulations in accordance with its procedures for ensuring full consideration of the environmental impact of FRA actions, as required by the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*), other environmental statutes, Executive Orders, and DOT Order 5610.1c. This final rule meets the criteria that establish this as a non-major action for environmental purposes.

#### *Federalism Implications*

FRA has analyzed this final rule in accordance with the principles and criteria contained in Executive Order 13132 issued on August 4, 1999, which directs Federal agencies to exercise great care in establishing policies that have federalism implications. See 64 FR 43255. In the NPRM, FRA acknowledged that the rule as proposed could have federalism implications. The governance of safety of hi-rail vehicles could have an unintended effect on State laws addressing the safety of these vehicles as they are operated over roads and highways, even though the rule is meant to cover the safety of hi-rail vehicles only while they are operated on railroad tracks. Although the requirements for hi-rail vehicles are not intended to preempt any State laws addressing motor vehicles, FRA requested comment concerning what State laws, if any, could be impacted by this rule. FRA received no comment in response to the request.

The RSAC, which recommended the proposed rule, has as permanent members two organizations representing State and local interests: the American Association of State Highway and Transportation Officials (AASHTO) and the Association of State Rail Safety Managers (ASRSM). The RSAC regularly provides recommendations to the FRA Administrator for solutions to regulatory issues that reflect significant input from its State members. From the absence of further comment from these representatives, or of any other representatives of State government, FRA concludes that this final rule has no federalism implications.

#### *Unfunded Mandates Reform Act of 1995*

Pursuant to the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4) 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." (See Section 201). Section 202 of the Act further requires that "before promulgating any general notice of proposed rulemaking that is likely to result in promulgation of any rule that includes any Federal mandate that may result in the 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 one 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. The final rule issued today will not result in the expenditure, in the aggregate, of \$100,000,000 or more in any one year, and thus preparation of 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." See 66 FR 28355; May 22, 2001. Under the Executive Order a "significant energy action" is defined as any action by an agency 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. FRA has determined that this final rule is not likely to 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 the Executive Order.

#### *Privacy Act*

Anyone is able to search the electronic form of all public submissions to any of our dockets by the name of the individual making the submission (or signing the submission, if made 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 by visiting <http://dms.dot.gov>.

#### **List of Subjects in 49 CFR Part 214**

Bridges, Occupational safety and health, Penalties, Railroad safety, Reporting and recordkeeping requirements.

#### **The Final Rule**

■ In consideration of the foregoing, chapter II, subtitle B of title 49, Code of Federal Regulations is amended as follows:

#### **PART 214—[AMENDED]**

■ 1. The authority citation for part 214 continues to read as follows:

**Authority:** 49 U.S.C. 20103, 20107 and 49 CFR 1.49.

■ 2. Section 214.7 is amended by adding in alphabetical order the following definitions:

#### **§ 214.7 Definitions.**

\* \* \* \* \*

*Designated official* means any person(s) designated by the employer to receive notification of non-complying conditions on on-track roadway maintenance machines and hi-rail vehicles.

\* \* \* \* \*

*Hi-rail vehicle* means a roadway maintenance machine that is manufactured to meet Federal Motor Vehicle Safety Standards and is equipped with retractable flanged wheels so that the vehicle may travel over the highway or on railroad tracks.

*Hi-rail vehicle, new* means a hi-rail vehicle that is ordered after December 26, 2003 or completed after September 27, 2004.

\* \* \* \* \*

*On-track roadway maintenance machine* means a self-propelled, rail-mounted, non-highway, maintenance machine whose light weight is in excess of 7,500 pounds, and whose purpose is not for the inspection of railroad track.

*On-track roadway maintenance machine, existing* means any on-track roadway maintenance machine that does not meet the definition of a "new on-track roadway maintenance machine."

*On-track roadway maintenance machine, new* means an on-track roadway maintenance machine that is ordered after December 26, 2003, and completed after September 27, 2004.

\* \* \* \* \*

■ 3. Subpart D is added to part 214 reading as follows:

#### **Subpart D—On-Track Roadway Maintenance Machines and Hi-Rail Vehicles**

Sec.

214.501 Purpose and scope.

- 214.503 Good-faith challenges; procedures for notification and resolution.
- 214.505 Required environmental control and protection systems for new on-track roadway maintenance machines with enclosed cabs.
- 214.507 Required safety equipment for new on-track roadway maintenance machines.
- 214.509 Required visual illumination and reflective devices for new on-track roadway maintenance machines.
- 214.511 Required audible warning devices for new on-track roadway maintenance machines.
- 214.513 Retrofitting of existing on-track roadway maintenance machines; general.
- 214.515 Overhead covers for existing on-track roadway maintenance machines.
- 214.517 Retrofitting of existing on-track roadway maintenance machines manufactured on or after January 1, 1991.
- 214.518 Safe and secure positions for riders.
- 214.519 Floors, decks, stairs, and ladders of on-track roadway maintenance machines.
- 214.521 Flagging equipment for on-track roadway maintenance machines and hi-rail vehicles.
- 214.523 Hi-rail vehicles.
- 214.525 Towing with on-track roadway maintenance machines or hi-rail vehicles.
- 214.527 On-track roadway maintenance machines; inspection for compliance and schedule for repairs.
- 214.529 In-service failure of primary braking system.
- 214.531 Schedule of repairs; general.
- 214.533 Schedule of repairs subject to availability of parts.

#### § 214.501 Purpose and scope.

(a) The purpose of this subpart is to prevent accidents and casualties caused by the lawful operation of on-track roadway maintenance machines and hi-rail vehicles.

(b) This subpart prescribes minimum safety standards for on-track roadway maintenance machines and hi-rail vehicles. An employer may prescribe additional or more stringent standards that are consistent with this subpart.

(c) Any working condition that involves the protection of employees engaged in roadway maintenance duties covered by this subpart but is not within the subject matter addressed by this subpart, including employee exposure to noise, shall be governed by the regulations of the U.S. Department of Labor, Occupational Safety and Health Administration.

#### § 214.503 Good-faith challenges; procedures for notification and resolution.

(a) An employee operating an on-track roadway maintenance machine or hi-rail vehicle shall inform the employer whenever the employee makes a good-

faith determination that the machine or vehicle does not comply with FRA regulations or has a condition that inhibits its safe operation.

(b) Any employee charged with operating an on-track roadway maintenance machine or hi-rail vehicle covered by this subpart may refuse to operate the machine or vehicle if the employee makes a good-faith determination that it does not comply with the requirements of this subpart or has a condition that inhibits its safe operation. The employer shall not require the employee to operate the machine or vehicle until the challenge resulting from the good-faith determination is resolved.

(c) Each employer shall have in place and follow written procedures to assure prompt and equitable resolution of challenges resulting from good-faith determinations made in accordance with this section. The procedures shall include specific steps to be taken by the employer to investigate each good-faith challenge, as well as procedures to follow once the employer finds a challenged machine or vehicle does not comply with this subpart or is otherwise unsafe to operate. The procedures shall also include the title and location of the employer's designated official.

#### § 214.505 Required environmental control and protection systems for new on-track roadway maintenance machines with enclosed cabs.

(a) The following new on-track roadway maintenance machines shall be equipped with enclosed cabs with operative heating systems, operative air conditioning systems, and operative positive pressurized ventilation systems:

- (1) Ballast regulators;
- (2) Tampers;
- (3) Mechanical brooms;
- (4) Rotary scarifiers;
- (5) Undercutters; and
- (6) Functional equivalents of any of the machines identified in paragraphs (a)(1) through (a)(5) of this section.

(b) New on-track roadway maintenance machines, and existing on-track roadway maintenance machines specifically designated by the employer, of the types identified in paragraphs (a)(1) through (a)(5) of this section, or functionally equivalent thereto, shall be capable of protecting employees in the cabs of the machines from exposure to air contaminants, in accordance with 29 CFR 1910.1000.

(c) An employer shall maintain a list of new and designated existing on-track roadway maintenance machines of the types identified in paragraphs (a)(1) through (a)(5) of this section, or

functionally equivalent thereto. The list shall be kept current and made available to the Federal Railroad Administration and other Federal and State agencies upon request.

(d) An existing roadway maintenance machine of the type identified in paragraphs (a)(1) through (a)(5) of this section, or functionally equivalent thereto, becomes "designated" when the employer adds the machine to the list required in paragraph (c) of this section. The designation is irrevocable, and the designated existing roadway maintenance machine remains subject to paragraph (b) of this section until it is retired or sold.

(e) If the ventilation system on a new on-track roadway maintenance machine or a designated existing on-track roadway maintenance machine of the type identified in paragraphs (a)(1) through (a)(5) of this section, or functionally equivalent thereto, becomes incapable of protecting an employee in the cab of the machine from exposure to air contaminants in accordance with 29 CFR 1910.1000, personal respiratory protective equipment shall be provided for each such employee until the machine is repaired in accordance with § 214.531.

(f) Personal respiratory protective equipment provided under paragraph (e) of this section shall comply with 29 CFR 1910.134.

(g) New on-track roadway maintenance machines with enclosed cabs, other than the types identified in paragraphs (a)(1) through (a)(5) of this section or functionally equivalent thereto, shall be equipped with operative heating and ventilation systems.

(h) When new on-track roadway maintenance machines require operation from non-enclosed stations outside of the main cab, the non-enclosed stations shall be equipped, where feasible from an engineering standpoint, with a permanent or temporary roof, canopy, or umbrella designed to provide cover from normal rainfall and midday sun.

#### § 214.507 Required safety equipment for new on-track roadway maintenance machines.

(a) Each new on-track roadway maintenance machine shall be equipped with:

- (1) A seat for each operator, except as provided in paragraph (b) of this section;
- (2) A safe and secure position with handholds, handrails, or a secure seat for each roadway worker transported on the machine. Each position shall be

protected from moving parts of the machine;

(3) A positive method of securement for turntables, on machines equipped with a turntable, through engagement of pins and hooks that block the descent of turntable devices below the rail head when not in use;

(4) A windshield with safety glass, or other material with similar properties, and power windshield wipers or suitable alternatives that provide the operator an equivalent level of vision if windshield wipers are incompatible with the windshield material;

(5) A machine braking system capable of effectively controlling the movement of the machine under normal operating conditions;

(6) A first-aid kit that is readily accessible and complies with 29 CFR 1926.50(d)(2); and

(7) An operative and properly charged fire extinguisher of 5 BC rating or higher which is securely mounted and readily accessible to the operator from the operator's work station.

(b) Each new on-track roadway maintenance machine designed to be operated and transported by the operator in a standing position shall be equipped with handholds and handrails to provide the operator with a safe and secure position.

(c) Each new on-track roadway maintenance machine that weighs more than 32,500 pounds light weight and is operated in excess of 20 mph shall be equipped with a speed indicator that is accurate within  $\pm 5$  mph of the actual speed at speeds of 10 mph and above.

(d) Each new on-track roadway maintenance machine shall have its as-built light weight displayed in a conspicuous location on the machine.

**§ 214.509 Required visual illumination and reflective devices for new on-track roadway maintenance machines.**

Each new on-track roadway maintenance machine shall be equipped with the following visual illumination and reflective devices:

(a) An illumination device, such as a headlight, capable of illuminating obstructions on the track ahead in the direction of travel for a distance of 300 feet under normal weather and atmospheric conditions;

(b) Work lights, if the machine is operated during the period between one-half hour after sunset and one-half hour before sunrise or in dark areas such as tunnels, unless equivalent lighting is otherwise provided;

(c) An operative 360-degree intermittent warning light or beacon mounted on the roof of the machine. New roadway maintenance machines

that are not equipped with fixed roofs and have a light weight less than 17,500 pounds are exempt from this requirement;

(d) A brake light activated by the application of the machine braking system, and designed to be visible for a distance of 300 feet under normal weather and atmospheric conditions; and

(e) Rearward viewing devices, such as rearview mirrors.

**§ 214.511 Required audible warning devices for new on-track roadway maintenance machines.**

Each new on-track roadway maintenance machine shall be equipped with:

(a) A horn or other audible warning device that produces a sound loud enough to be heard by roadway workers and other machine operators within the immediate work area. The triggering mechanism for the device shall be clearly identifiable and within easy reach of the machine operator; and

(b) An automatic change-of-direction alarm which provides an audible signal that is at least three seconds long and is distinguishable from the surrounding noise. Change of direction alarms may be interrupted by the machine operator when operating the machine in the work mode if the function of the machine would result in a constant, or almost constant, sounding of the device. In any action brought by FRA to enforce the change-of-direction alarm requirement, the employer shall have the burden of proving that use of the change-of-direction alarm in a particular work function would cause a constant, or almost constant, sounding of the device.

**§ 214.513 Retrofitting of existing on-track roadway maintenance machines; general.**

(a) Each existing on-track roadway maintenance machine shall have a safe and secure position for each roadway worker transported on the machine and protection from moving parts of the machine.

(b) By March 28, 2005, each existing on-track roadway maintenance machine shall be equipped with a permanent or portable horn or other audible warning device that produces a sound loud enough to be heard by roadway workers and other machine operators within the immediate work area. The triggering mechanism for the device shall be clearly identifiable and within easy reach of the machine operator.

(c) By March 28, 2005, each existing on-track roadway maintenance machine shall be equipped with a permanent illumination device or a portable light that is securely placed and not hand-

held. The illumination device or portable light shall be capable of illuminating obstructions on the track ahead for a distance of 300 feet under normal weather and atmospheric conditions when the machine is operated during the period between one-half hour after sunset and one-half hour before sunrise or in dark areas such as tunnels.

**§ 214.515 Overhead covers for existing on-track roadway maintenance machines.**

(a) For those existing on-track roadway maintenance machines either currently or previously equipped with overhead covers for the operator's position, defective covers shall be repaired, and missing covers shall be reinstalled, by March 28, 2005 and thereafter maintained in accordance with the provisions of § 214.531.

(b) For those existing on-track roadway maintenance machines that are not already equipped with overhead covers for the operator's position, the employer shall evaluate the feasibility of providing an overhead cover on such a machine if requested in writing by the operator assigned to operate the machine or by the operator's designated representative. The employer shall provide the operator a written response to each request within 60 days. When the employer finds the addition of an overhead cover is not feasible, the response shall include an explanation of the reasoning used by the employer to reach that conclusion.

(c) For purposes of this section, overhead covers shall provide the operator's position with cover from normal rainfall and midday sun.

**§ 214.517 Retrofitting of existing on-track roadway maintenance machines manufactured on or after January 1, 1991.**

In addition to meeting the requirements of § 214.513, after March 28, 2005 each existing on-track roadway maintenance machine manufactured on or after January 1, 1991, shall have the following:

(a) A change-of-direction alarm or rearview mirror or other rearward viewing device, if either device is feasible, given the machine's design, and if either device adds operational safety value, given the machine's function. In any action brought by FRA to enforce this requirement, the employer shall have the burden of proving that neither device is feasible or adds operational safety value, or both, given the machine's design or work function.

(b) An operative heater, when the machine is operated at an ambient temperature less than 50 degrees

Fahrenheit and is equipped with, or has been equipped with, a heater.

(c) The light weight of the machine stenciled or otherwise clearly displayed on the machine, if the light weight is known.

(d) Reflective material, or a reflective device, or operable brake lights.

(e) Safety glass when its glass is normally replaced, except that replacement glass that is specifically intended for on-track roadway maintenance machines and is in the employer's inventory as of September 26, 2003 may be utilized until exhausted.

(f) A turntable restraint device, on machines equipped with a turntable, to prevent undesired lowering, or a warning light indicating that the turntable is not in the normal travel position.

(g) Handholds, handrails, or a secure seat or bench position for each roadway worker transported on the machine.

**§ 214.518 Safe and secure positions for riders.**

A roadway worker, other than the machine operator(s), is prohibited from riding on any on-track roadway maintenance machine unless a safe and secure position for each roadway worker on the machine is clearly identified by stenciling, marking, or other written notice.

**§ 214.519 Floors, decks, stairs, and ladders of on-track roadway maintenance machines.**

Floors, decks, stairs, and ladders of on-track roadway maintenance machines shall be of appropriate design and maintained to provide secure access and footing, and shall be free of oil, grease, or any obstruction which creates a slipping, falling, or fire hazard.

**§ 214.521 Flagging equipment for on-track roadway maintenance machines and hi-rail vehicles.**

When being operated over trackage subject to a railroad operating rule requiring flagging, each on-track roadway maintenance machine and each hi-rail vehicle shall have on board a flagging kit that complies with the operating rules of the railroad, if the equipment is not part of a roadway work group or is the lead or trailing piece of equipment in a roadway work group operating under the same occupancy authority.

**§ 214.523 Hi-rail vehicles.**

(a) The hi-rail gear of all hi-rail vehicles shall be inspected for safety at least annually and with no more than 14 months between inspections. Tram, wheel wear, and gage shall be measured

and, if necessary, adjusted to allow the vehicle to be safely operated.

(b) Each employer shall keep records pertaining to compliance with paragraph (a) of this section. Records may be kept on forms provided by the employer or by electronic means. The employer shall retain the record of each inspection until the next required inspection is performed. The records shall be made available for inspection and copying during normal business hours by representatives of FRA and States participating under part 212 of this chapter. The records may be kept on the hi-rail vehicle or at a location designated by the employer.

(c) A new hi-rail vehicle shall be equipped with:

(1) An automatic change-of-direction alarm or backup alarm that provides an audible signal at least three seconds long and distinguishable from the surrounding noise; and

(2) An operable 360-degree intermittent warning light or beacon mounted on the outside of the vehicle.

(d)(1) The operator of a hi-rail vehicle shall check the vehicle for compliance with this subpart, prior to using the vehicle at the start of the operator's work shift.

(2) A non-complying condition that cannot be repaired immediately shall be tagged and dated in a manner prescribed by the employer and reported to the designated official.

(3) Non-complying automatic change-of-direction alarms, backup alarms, and 360-degree intermittent warning lights or beacons shall be repaired or replaced as soon as practicable within seven calendar days.

**§ 214.525 Towing with on-track roadway maintenance machines or hi-rail vehicles.**

(a) When used to tow pushcars or other maintenance-of-way equipment, each on-track roadway maintenance machine or hi-rail vehicle shall be equipped with a towing bar or other coupling device that provides a safe and secure attachment.

(b) An on-track roadway maintenance machine or hi-rail vehicle shall not be used to tow pushcars or other maintenance-of-way equipment if the towing would cause the machine or hi-rail vehicle to exceed the capabilities of its braking system. In determining the limit of the braking system, the employer must consider the track grade (slope), as well as the number and weight of pushcars or other equipment to be towed.

**§ 214.527 On-track roadway maintenance machines; inspection for compliance and schedule for repairs.**

(a) The operator of an on-track roadway maintenance machine shall check the machine components for compliance with this subpart, prior to using the machine at the start of the operator's work shift.

(b) Any non-complying condition that cannot be repaired immediately shall be tagged and dated in a manner prescribed by the employer and reported to the designated official.

(c) The operation of an on-track roadway maintenance machine with a non-complying condition shall be governed by the following requirements:

(1) An on-track roadway maintenance machine with headlights or work lights that are not in compliance may be operated for a period not exceeding 7 calendar days and only during the period between one-half hour before sunrise and one-half hour after sunset;

(2) A portable horn may be substituted for a non-complying or missing horn for a period not exceeding seven calendar days;

(3) A fire extinguisher readily available for use may temporarily replace a missing, defective or discharged fire extinguisher on a new on-track roadway maintenance machine for a period not exceeding 7 calendar days, pending the permanent replacement or repair of the missing, defective or used fire extinguisher;

(4) Non-complying automatic change-of-direction alarms, backup alarms, and 360-degree intermittent warning lights or beacons shall be repaired or replaced as soon as practicable within 7 calendar days; and

(5) A structurally defective or missing operator's seat shall be replaced or repaired within 24 hours or by the start of the machine's next tour of duty, whichever is later. The machine may be operated for the remainder of the operator's tour of duty if the defective or missing operator's seat does not prevent its safe operation.

**§ 214.529 In-service failure of primary braking system.**

(a) In the event of a total in-service failure of its primary braking system, an on-track roadway maintenance machine may be operated for the remainder of its tour of duty with the use of a secondary braking system or by coupling to another machine, if such operations may be done safely.

(b) If the total in-service failure of an on-track roadway maintenance machine's primary braking system occurs where other equipment is not available for coupling, the machine



may, if it is safe to do so, travel to a clearance or repair point where it shall be placed out of service until repaired.

**§ 214.531 Schedule of repairs; general.**

Except as provided in §§ 214.527(c)(5), 214.529, and 214.533, an on-track roadway maintenance machine or hi-rail vehicle that does not meet all the requirements of this subpart shall be brought into compliance as soon as practicable within seven calendar days. If repairs are not made within seven calendar days, the on-track roadway maintenance machine or hi-rail vehicle shall be placed out of on-track service.

**§ 214.533 Schedule of repairs subject to availability of parts.**

(a) The employer shall order a part necessary to repair a non-complying condition on an on-track roadway maintenance machine or a hi-rail vehicle by the end of the next business day following the report of the defect.

(b) When the employer cannot repair a non-complying condition as required by § 214.531 because of the temporary unavailability of a necessary part, the employer shall repair the on-track roadway maintenance machine or hi-rail vehicle within seven calendar days after receiving the necessary part. The employer may continue to use the on-track roadway maintenance machine or hi-rail vehicle with a non-complying condition until receiving the necessary part(s) for repair, subject to the requirements of § 214.503. However, if a non-complying condition is not repaired within 30 days following the report of the defect, the employer shall remove the on-track roadway maintenance machine or hi-rail vehicle from on-track service until it is brought into compliance with this subpart.

(c) If the employer fails to order a part necessary to repair the reported non-complying condition, or if it fails to install an available part within the required seven calendar days, the on-

track roadway maintenance machine or hi-rail vehicle shall be removed from on-track service until brought into compliance with this subpart.

(d) Each employer shall maintain records pertaining to compliance with this section. Records may be kept on forms provided by the employer or by electronic means. The employer shall retain each record for at least one year, and the records shall be made available for inspection and copying during normal business hours by representatives of FRA and States participating under part 212 of this chapter. The records may be kept on the on-track roadway maintenance machine or hi-rail vehicle or at a location designated by the employer.

■ 4. Appendix A to part 214 is amended with the addition of the following new entries for subpart D:

**Appendix A to Part 214—Schedule of Civil Penalties<sup>1</sup>**

\* \* \* \* \*

Section	Violation	Willful violation
* * * * *		
<b>Subpart D—On-Track Roadway Maintenance Machines and Hi-Rail Vehicles</b>		
214.503 Good-faith challenges; procedures for notification and resolution:		
(a) Failure of employee to notify employer that the machine or vehicle does not comply with this subpart or has a condition inhibiting safe operation .....	4,000	10,000
(b) Roadway worker required to operate machine or vehicle when good-faith challenge not resolved .....	5,000	10,000
(c) Failure of employer to have or follow written procedures to resolve good-faith challenges .....	5,000	10,000
214.505 Required environmental control and protection systems for new on-track roadway maintenance machines with enclosed cabs:		
(a) Failure to equip new machines with required systems .....	5,000	10,000
(b) Failure of new or existing machines to protect employees from exposure to air contaminants .....	5,000	10,000
(c) Failure of employer to maintain required list of machines or make list available .....	2,000	4,000
(d) Removal of “designated machine” from list before retired or sold .....	2,000	4,000
(e) Personal respiratory protective equipment not provided when ventilation system fails .....	5,000	10,000
(f) Personal respiratory protective equipment fails to meet required standards .....	5,000	10,000
(g) Other new machines with enclosed cabs not equipped with operable heating and ventilation systems ..	5,000	10,000
(h) Non-enclosed station not equipped with covering, where feasible .....	5,000	10,000
214.507 Required safety equipment for new on-track roadway maintenance machines:		
(a)(1)–(5) Failure to equip new machine or provide protection as specified in these paragraphs .....	5,000	10,000
(a)(6)–(7) Failure to equip new machine with first-aid kit or operative and charged fire extinguisher .....	2,500	5,000
(b) Position for operator to stand not properly equipped to provide safe and secure position .....	5,000	10,000
(c) New machine not equipped with accurate speed indicator, as required. ....	2,500	5,000
(d) As-built light weight not conspicuously displayed on new machine .....	2,500	5,000
214.509 Required visual illumination and reflective devices for new on-track roadway maintenance machines	2,500	5,000
214.511 Required audible warning devices for new on-track roadway maintenance machines .....	5,000	10,000
214.513 Retrofitting of existing on-track roadway maintenance machines; general:		
(a) Failure to provide safe and secure position and protection from moving parts 2,000 4,000 inside cab for each roadway worker transported on machine .....	5,000	10,000
(b) Horn or other audible warning device is missing, inoperable, or has non-compliant triggering mechanism .....	2,500	5,000
(c) Illumination device or portable light missing, inoperable, improperly secured, or incapable of illuminating track as required .....	2,500	5,000
214.515 Overhead covers for existing on-track roadway maintenance machines:		
(a) Failure to repair, reinstall, or maintain overhead cover as required .....	5,000	10,000
(b) Failure to provide written response to operator’s request within 60 days .....	2,000	4,000
214.517 Retrofitting of existing on-track roadway maintenance machines manufactured on or after January 1, 1991:		
(a) Failure to equip machine with change-of-direction alarm or rearward viewing device. ....	5,000	10,000

<sup>1</sup> A penalty may be assessed against an individual only for a willful violation. The Administrator reserves the right to assess a penalty of up to \$22,000 for any violation where circumstances warrant. See 49 CFR part 209, appendix A.

Section	Violation	Willful violation
(b) Failure to equip machine with operative heater .....	5,000	10,000
(c) Failure to display light weight of machine as required .....	2,500	5,000
(d) Failure to equip machine with reflective material, reflective device, or operable brake lights .....	5,000	10,000
(e) Failure to install or replace safety glass as required .....	5,000	10,000
(f) Failure to equip machine with turntable restraint device or warning light as required .....	5,000	10,000
(g) Failure to equip machine with handholds, handrails, or secure seat or bench position as required .....	5,000	10,000
214.518 Safe and secure position for riders .....	5,000	10,000
214.519 Floors, decks, stairs, and ladders for on-track roadway maintenance machines .....	5,000	10,000
214.521 Flagging equipment for on-track roadway maintenance machines and hi-rail vehicles .....	2,500	5,000
214.523 Hi-rail vehicles:		
(a) Failure to inspect hi-rail gear annually .....	5,000	10,000
(b) Failure to maintain inspection record or make record available to FRA .....	2,000	4,000
(c) Failure to equip new hi-rail vehicle with alarm and light or beacon as required .....	2,500	5,000
(d) Failure of operator to tag, date or report non-complying condition .....	2,000	4,000
(d)(3) Failure to repair or replace non-complying alarms, lights or beacons as required .....	2,500	5,000
214.525 Towing with on-track roadway maintenance machines or hi-rail vehicles .....	5,000	10,000
214.527 On-track roadway maintenance machines; inspection for compliance and schedule for repairs:		
(a) Failure of operator to check on-track roadway maintenance machine for compliance .....	2,000	4,000
(b) Failure of operator to tag, date, or report noncomplying condition .....	2,000	4,000
(c)(1)-(4) Failure to meet requirements for operating on-track roadway maintenance machine with non-complying headlights, work lights, horn, fire extinguisher, alarm, warning light, or beacon .....	2,500	5,000
(c)(5) Failure to repair or replace defective or missing operator's seat within required time period .....	5,000	10,000
214.529 In-service failure of primary braking system .....	5,000	10,000
214.531 Schedule of repairs; general .....	2,500	5,000
214.533 Schedule of repairs subject to availability of parts:		
(a)-(c) Failure to order necessary part(s), make repair(s), or remove on-track roadway maintenance machine or hi-rail vehicle from service as required .....	2,500	5,000
(d) Failure to maintain record or make record available to FRA .....	2,000	4,000

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**Allan Rutter,**

*Federal Railroad Administrator.*

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