

regulatory issues that reflect significant input from its State members. To date, FRA has received no indication of concerns about the Federalism implications of this rulemaking from these representatives or from any other representative. States and other governments were afforded opportunity to consult by virtue of the NPRM and comment period.

It should be noted that on April 27, 2005, FRA received from the State of California a petition for rulemaking on the subject of remote control operations referred to in the **SUPPLEMENTARY INFORMATION** section as "Technology Aided Point Protection." The petition requested that FRA initiate a rulemaking "to formally approve and establish rules affecting RCL [i.e., remote control locomotive] operations by railroads over public highway-rail at-grade crossings." California's petition did not raise an issue regarding preemption. On October 27, 2005, FRA denied California's rulemaking petition because it was procedurally deficient and it did not include sufficient information upon which to base a rulemaking proceeding. See Docket No. FRA-2005-21094 (found at <http://dms.dot.gov/>). Nevertheless, this final rule contains specific provisions of the kind requested in the California petition.

For the foregoing reasons, FRA believes that this final rule is in accordance with the principles and criteria contained in Executive Order 13132.

#### E. Environmental Impact

FRA has evaluated this final rule in accordance with its "Procedures for Considering Environmental Impacts" (FRA's Procedures) (64 FR 28545, May 26, 1999) as required by the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*), other environmental statutes, Executive Orders, and related regulatory requirements. FRA has determined that this final rule is not a major FRA action (requiring the preparation of an environmental impact statement or environmental assessment) because it is categorically excluded from detailed environmental review pursuant to section 4(c)(20) of FRA's Procedures. 64 FR 28547, May 26, 1999. In accordance with section 4(c) and (e) of FRA's Procedures, the agency has further concluded that no extraordinary circumstances exist with respect to this regulation that might trigger the need for a more detailed environmental review. As a result, FRA finds that this final rule is not a major Federal action significantly affecting the quality of the human environment.

#### F. Unfunded Mandates Act of 1995

Pursuant to Section 201 of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4, 2 U.S.C. 1531), each Federal agency "shall, unless otherwise prohibited by law, assess the effects of Federal regulatory actions on State, local, and tribal governments, and the private sector (other than to the extent that such regulations incorporate requirements specifically set forth in law)." Section 202 of the Act (2 U.S.C. 1532) further requires that "before promulgating any general notice of proposed rulemaking that is likely to result in the promulgation of any rule that includes any Federal mandate that may result in expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100,000,000 or more (adjusted annually for inflation) currently \$128,100,000 in any 1 year, and before promulgating any final rule for which a general notice of proposed rulemaking was published, the agency shall prepare a written statement" detailing the effect on State, local, and tribal governments and the private sector. The final rule would not result in the expenditure, in the aggregate, of \$128,100,000 or more in any one year, and thus preparation of such a statement is not required.

#### G. Energy Impact

Executive Order 13211 requires Federal agencies to prepare a Statement of Energy Effects for any "significant energy action." 66 FR 28355 (May 22, 2001). Under the Executive Order, a "significant energy action" is defined as any action by an agency (normally published in the **Federal Register**) that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of proposed rulemaking, and notices of proposed rulemaking: (1)(i) that is a significant regulatory action under Executive Order 12866 or any successor order, and (ii) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) that is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action. FRA has evaluated this final rule in accordance with Executive Order 13211. 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 Executive Order 13211.

#### List of Subjects

##### 49 CFR Part 217

Penalties, Railroad safety, and Reporting and recordkeeping requirements.

##### 49 CFR Part 218

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

#### The Final Rule

■ For the reasons discussed in the preamble, FRA amends parts 217 and 218 of Title 49, Code of Federal Regulations as follows:

#### PART 217—[AMENDED]

■ 1. The authority citation for part 217 continues to read as follows:

**Authority:** 49 U.S.C. 20103, 20107; 28 U.S.C. 2461, note; and 49 CFR 1.49.

■ 2. Section 217.2 is added to read as follows:

##### § 217.2 Preemptive effect.

Normal State negligence standards apply where there is no Federal action covering the subject matter. Under 49 U.S.C. 20106 (section 20106), issuance of the regulations in this part preempts any State law, regulation, or order covering the same subject matter, except an additional or more stringent law, regulation, or order that is necessary to eliminate or reduce an essentially local railroad safety or railroad security hazard; that is not incompatible with a law, regulation, or order of the United States Government; and that does not unreasonably burden interstate commerce. Section 20106 permits State tort actions arising from events or activities occurring on or after January 18, 2002, for the following: violation of the Federal standard of care established by regulation or order issued by the Secretary of Transportation (with respect to railroad safety, such as these regulations) or the Secretary of Homeland Security (with respect to railroad security); a party's violation of, or failure to comply with, its own plan, rule, or standard that it created pursuant to a regulation or order issued by either of the two Secretaries; and a party's violation of a State standard that is necessary to eliminate or reduce an essentially local safety or security hazard, is not incompatible with a law, regulation, or order of the United States Government, and does not unreasonably burden interstate commerce. Nothing in section 20106 creates a Federal cause of action on behalf of an injured party or

confers Federal question jurisdiction for such State law causes of action.

■ 3. Section 217.4 is amended by adding the following definitions of *Associate Administrator for Safety, FRA*, and *Qualified* in alphabetical order to read as follows:

**§ 217.4 Definitions.**

\* \* \* \* \*

*Associate Administrator for Safety* means the Associate Administrator for Safety of the Federal Railroad Administration or that person's delegate as designated in writing.

\* \* \* \* \*

*FRA* means the Federal Railroad Administration.

*Qualified* means that a person has successfully completed all instruction, training, and examination programs required by the railroad and this part and that the person, therefore, has actual knowledge or may reasonably be expected to have knowledge of the subject on which the person is expected to be competent.

\* \* \* \* \*

■ 4. Section 217.9 is revised to read as follows:

**§ 217.9 Program of operational tests and inspections; recordkeeping.**

(a) *Requirement to conduct operational tests and inspections.* Each railroad to which this part applies shall periodically conduct operational tests and inspections to determine the extent of compliance with its code of operating rules, timetables, and timetable special instructions, specifically including tests and inspections sufficient to verify compliance with the requirements of subpart F of part 218 of this chapter, in accordance with a written program as required by paragraph (c) of this section.

(b) *Railroad and railroad testing officer responsibilities.* The requirements of this paragraph are applicable on or after July 1, 2008.

(1) Each railroad officer who conducts operational tests and inspections (railroad testing officer) shall:

(i) Be qualified on the railroad's operating rules in accordance with § 217.11 of this part;

(ii) Be qualified on the operational testing and inspection program requirements and procedures relevant to the testing and inspections the officer will conduct;

(iii) Receive appropriate field training, as necessary to achieve proficiency, on each operational test or inspection that the officer is authorized to conduct; and

(iv) Conduct operational tests and inspections in accordance with the railroad's program of operational tests and inspections.

(2) Written records documenting qualification of each railroad testing officer shall be retained at the railroad's system headquarters and at the division headquarters for each division where the officer is assigned and shall be made available to representatives of the FRA for inspection and copying during normal business hours.

(c) *Written program of operational tests and inspections.* Every railroad shall have a written program of operational tests and inspections in effect. New railroads shall have such a program within 30 days of commencing rail operations. The program shall—

(1) Provide for operational testing and inspection under the various operating conditions on the railroad. As of July 1, 2008, the program must address with particular emphasis those operating rules that cause or are likely to cause the most accidents or incidents, such as those accidents or incidents identified in the quarterly reviews, six month reviews, and the annual summaries as required under paragraphs (e) and (f) of this section, as applicable;

(2) Require a minimum number of tests and inspections per year covering the requirements of part 218, subpart F of this chapter;

(3) Describe each type of operational test and inspection required, including the means and procedures used to carry it out;

(4) State the purpose of each type of operational test and inspection;

(5) State, according to operating divisions where applicable, the frequency with which each type of operational test and inspection is to be conducted;

(6) As of July 1, 2008, identify the officer(s) by name, job title, and, division or system, who shall be responsible for ensuring that the program of operational tests and inspections is properly implemented. The responsibilities of such officers shall include, but not be limited to, ensuring that the railroad's testing officers are directing their efforts in an appropriate manner to reduce accidents/incidents and that all required reviews and summaries are completed. A railroad with divisions shall identify at least one officer at the system headquarters who is responsible for overseeing the entire program and the implementation by each division.

(7) Include a schedule for making the program fully operative within 210 days after it begins.

(d) *Records.* (1) Each railroad to which this part applies shall keep a record of the date, time, place, and result of each operational test and inspection that was performed in

accordance with its program. Each record shall specify the officer administering the test and inspection and each employee tested. These records shall be retained at the system headquarters and at each division headquarters where the tests and inspections are conducted for one calendar year after the end of the calendar year to which they relate. These records shall be made available to representatives of the FRA for inspection and copying during normal business hours.

(2) Each railroad shall retain one copy of its current program for periodic performance of the operational tests and inspections required by paragraph (a) of this section and one copy of each subsequent amendment to such program. These records shall be retained at the system headquarters and at each division headquarters where the tests and inspections are conducted for three calendar years after the end of the calendar year to which they relate. These records shall be made available to representatives of the FRA for inspection and copying during normal business hours.

(e) *Reviews of tests and inspections and adjustments to the program of operational tests.* This paragraph (e) shall apply to each Class I railroad and the National Railroad Passenger Corporation effective July 1, 2008 and to all other railroads subject to this paragraph effective January 1, 2009.

(1) *Reviews by railroads other than passenger railroads.* Each railroad to which this part applies shall conduct periodic reviews and analyses as provided in this paragraph and shall retain, at each division headquarters, where applicable, and at its system headquarters, one copy of the following written reviews, provided however that this requirement does not apply to either a railroad with less than 400,000 total employee work hours annually or a passenger railroad subject to paragraph (e)(2) of this section.

(i) *Quarterly review.* The designated officer of each division headquarters, or system headquarters, if no division headquarters exists, shall conduct a written quarterly review of the accident/incident data, the results of prior operational tests and inspections, and other pertinent safety data for that division or system to identify the relevant operating rules related to those accidents/incidents that occurred during the quarter. The review shall also include the name of each railroad testing officer, the number of tests and inspections conducted by each officer, and whether the officer conducted the minimum number of each type of test or

inspection required by the railroad's program. Based upon the results of that review, the designated officer shall make any necessary adjustments to the tests and inspections required of railroad officers for the subsequent period(s). Quarterly reviews and adjustments shall be completed no later than 30 days after the quarter has ended.

(ii) *Six month review.* The designated officer of each system headquarters office responsible for development and administration of the program of operational tests and inspections shall conduct a review of the program of operational tests and inspections on a six month basis to ensure that it is being utilized as intended, that the quarterly reviews provided for in this paragraph have been properly completed, that appropriate adjustments have been made to the distribution of tests and inspections required, and that the railroad testing officers are appropriately directing their efforts. Six month reviews shall be completed no later than 60 days after the review period has ended.

(2) *Reviews by passenger railroads.* Not less than once every six months, the designated officer(s) of the National Railroad Passenger Corporation and of each railroad providing commuter service in a metropolitan or suburban area shall conduct periodic reviews and analyses as provided in this paragraph and shall retain, at each division headquarters, where applicable, and at its system headquarters, one copy of the reviews. Each such review shall be completed within 30 days of the close of the period. The designated officer(s) shall conduct a written review of:

(i) The operational testing and inspection data for each division, if any, or the system to determine compliance by the railroad testing officers with its program of operational tests and inspections required by paragraph (c) of this section. At a minimum, this review shall include the name of each railroad testing officer, the number of tests and inspections conducted by each officer, and whether the officer conducted the minimum number of each type of test or inspection required by the railroad's program;

(ii) Accident/incident data, the results of prior operational tests and inspections, and other pertinent safety data for each division, if any, or the system to identify the relevant operating rules related to those accidents/incidents that occurred during the period. Based upon the results of that

review, the designated officer(s) shall make any necessary adjustments to the tests and inspections required of railroad officers for the subsequent period(s); and

(iii) Implementation of the program of operational tests and inspections from a system perspective, to ensure that it is being utilized as intended, that the other reviews provided for in this paragraph have been properly completed, that appropriate adjustments have been made to the distribution of tests and inspections required, and that the railroad testing officers are appropriately directing their efforts.

(3) *Records retention.* The records of periodic reviews required in paragraphs (e)(1) and (e)(2) of this section shall be retained for a period of one year after the end of the calendar year to which they relate and shall be made available to representatives of FRA for inspection and copying during normal business hours.

(f) *Annual summary of operational tests and inspections.* Before March 1 of each calendar year, each railroad to which this part applies, except for a railroad with less than 400,000 total employee work hours annually, shall retain, at each of its division headquarters and at the system headquarters of the railroad, one copy of a written summary of the following with respect to its previous calendar year activities: The number, type, and result of each operational test and inspection, stated according to operating divisions where applicable, that was conducted as required by paragraphs (a) and (c) of this section. These records shall be retained for three calendar years after the end of the calendar year to which they relate and shall be made available to representatives of the FRA for inspection and copying during normal business hours.

(g) *Electronic recordkeeping.* Each railroad to which this part applies is authorized to retain by electronic recordkeeping the information prescribed in this section, provided that all of the following conditions are met:

(1) The railroad adequately limits and controls accessibility to such information retained in its electronic database system and identifies those individuals who have such access;

(2) The railroad has a terminal at the system headquarters and at each division headquarters;

(3) Each such terminal has a computer (i.e., monitor, central processing unit,

and keyboard) and either a facsimile machine or a printer connected to the computer to retrieve and produce information in a usable format for immediate review by FRA representatives;

(4) The railroad has a designated representative who is authorized to authenticate retrieved information from the electronic system as true and accurate copies of the electronically kept records; and

(5) The railroad provides representatives of the FRA with immediate access to these records for inspection and copying during normal business hours and provides printouts of such records upon request.

(h) Upon review of the program of operational tests and inspections required by this section, the Associate Administrator for Safety may, for cause stated, disapprove the program. Notification of such disapproval shall be made in writing and specify the basis for the disapproval decision. If the Associate Administrator for Safety disapproves the program,

(1) The railroad has 35 days from the date of the written notification of such disapproval to:

(i) Amend its program and submit it to the Associate Administrator for Safety for approval; or

(ii) Provide a written response in support of the program to the Associate Administrator for Safety, who informs the railroad of FRA's final decision in writing; and

(2) A failure to submit the program with the necessary revisions to the Associate Administrator for Safety in accordance with this paragraph will be considered a failure to implement a program under this part.

■ 5. Section 217.11(c) is revised to read as follows:

**§ 217.11 Program of instruction on operating rules; recordkeeping; electronic recordkeeping.**

\* \* \* \* \*

(c) Each railroad to which this part applies is authorized to retain by electronic recordkeeping its program for periodic instruction of its employees on operating rules provided that the requirements stated in § 217.9(g)(1) through (5) of this part are satisfied.

■ 6. Appendix A to part 217 is amended by revising the entry for § 217.9 to read as follows:

APPENDIX A TO PART 217—SCHEDULE OF CIVIL PENALTIES

Section	Violation	Willful violation
217.9 Operational tests and inspections:		
(a) Failure to implement a program .....	\$9,500–12,500	\$13,000–16,000
(b) Railroad and railroad testing officer responsibilities:		
(1) Failure to provide instruction, examination, or field training, or failure to conduct tests in accordance with program .....	9,500	13,000
(2) Records .....	7,500	11,000
(c) Record of program; program incomplete .....	7,500–12,500	11,000–16,000
(d) Records of individual tests and inspections .....	7,500	.....
(e) Failure to retain copy of or conduct:		
(1)(i) Quarterly review .....	9,500	13,000
(1)(ii) and (2) Six month review .....	9,500	13,000
(3) Records .....	7,500	11,000
(f) Annual summary .....	7,500	11,000
(h) Failure to timely or appropriately amend program after disapproval .....	9,500–12,500	13,000–16,000

**PART 218—[AMENDED]**

■ 7. The authority citation for part 218 continues to read as follows:

**Authority:** 49 U.S.C. 20103, 20107; 28 U.S.C. 2461, note; and 49 CFR 1.49.

■ 8. Section 218.4 is added to read as follows:

**§ 218.4 Preemptive effect.**

Normal State negligence standards apply where there is no Federal action covering the subject matter. Under 49 U.S.C. 20106 (section 20106), issuance of the regulations in this part preempts any State law, regulation, or order covering the same subject matter, except an additional or more stringent law, regulation, or order that is necessary to eliminate or reduce an essentially local railroad safety or railroad security hazard; that is not incompatible with a law, regulation, or order of the United States Government; and that does not unreasonably burden interstate commerce. Section 20106 permits State tort actions arising from events or activities occurring on or after January 18, 2002, for the following: Violation of the Federal standard of care established by regulation or order issued the Secretary of Transportation (with respect to railroad safety, such as these regulations) or the Secretary of Homeland Security (with respect to railroad security); a party's violation of, or failure to comply with, its own plan, rule, or standard that it created pursuant to a regulation or order issued by either of the two Secretaries; and a party's violation of a State standard that is necessary to eliminate or reduce an essentially local safety or security hazard, is not incompatible with a law, regulation, or order of the United States Government, and does not unreasonably burden interstate commerce. Nothing in

section 20106 creates a Federal cause of action on behalf of an injured party or confers Federal question jurisdiction for such State law causes of action.

■ 9. Section 218.5 is amended by revising the definitions of *Flagman's signals* and *Locomotive* to read as follows:

**§ 218.5 Definitions.**

*Flagman's signals* means a red flag by day and a white light at night, and fusees as prescribed in the railroad's operating rules.

*Locomotive* means, except for purposes of subpart F of this part, a self-propelled unit of equipment designed for moving other railroad rolling equipment in revenue service including a self-propelled unit designed to carry freight or passenger traffic, or both, and may consist of one or more units operated from a single control.

■ 10. Section 218.37 is amended by revising paragraphs (a)(1)(iii) and (a)(1)(iv) to read as follows:

**§ 218.37 Flag protection.**

(a) \* \* \*  
 (1) \* \* \*  
 (iii) When a train stops on main track, flag protection against following trains on the same track must be provided as follows: A crew member with flagman's signals must immediately go back at least the distance prescribed by timetable or other instructions for the territory and display one lighted fusee. The crew member may then return one-half of the distance to the crew member's train where the crew member must remain until the crew member has stopped the approaching train or is recalled. When recalled, the crew

member must leave one lighted fusee and while returning to the crew member's train, the crew member must also place single lighted fusees at intervals that do not exceed the burning time of the fusee. When the train departs, a crew member must leave one lighted fusee and until the train resumes speed not less than one-half the maximum authorized speed (including slow order limits) in that territory, the crew member must drop off single lighted fusees at intervals that do not exceed the burning time of the fusee.

(iv) When required by the railroad's operating rules, a forward crew member with flagman's signals must protect the front of the crew member's train against opposing movements by immediately going forward at least the distance prescribed by timetable or other instructions for the territory, displaying one lighted fusee, and remaining at that location until recalled.

■ 11. Add new subpart F to part 218 to read as follows:

**Subpart F—Handling Equipment, Switches, and Fixed Derails**

- Sec.
- 218.91 Purpose and scope.
- 218.93 Definitions.
- 218.95 Instruction, training, and examination.
- 218.97 Good faith challenge procedures.
- 218.99 Shoving or pushing movements.
- 218.101 Leaving rolling and on-track maintenance-of-way equipment in the clear.
- 218.103 Hand-operated switches, including crossover switches.
- 218.105 Additional operational requirements for hand-operated main track switches.
- 218.107 Additional operational requirements for hand-operated crossover switches.
- 218.109 Hand-operated fixed derails.

## Subpart F—Handling Equipment, Switches, and Fixed Derails

### § 218.91 Purpose and scope.

(a) The purpose of this subpart is to prevent accidents and casualties that can result from the mishandling of equipment, switches, and fixed derails.

(b) This subpart prescribes minimum operating rule requirements for the handling of equipment, switches, and fixed derails. Each railroad may prescribe additional or more stringent requirements in its operating rules, timetables, timetable special instructions, and other instructions.

### § 218.93 Definitions.

As used in this subpart—

*Associate Administrator for Safety* means the Associate Administrator for Safety of the Federal Railroad Administration or that person's delegate as designated in writing.

*Clearance point* means the location near a turnout beyond which it is unsafe for passage on an adjacent track(s).

Where a person is permitted by a railroad's operating rules to ride the side of a car, a clearance point shall accommodate a person riding the side of a car.

*Correspondence of crossover switches* means both crossover switches are lined for the crossover or both are lined for the straight tracks.

*Crossover* means, for purposes of this subpart only, a track connection between two adjacent, but not necessarily parallel, tracks, consisting of two switches, which is intended to be used primarily for the purpose of crossing over from one track to another.

*Employee* means an individual who is engaged or compensated by a railroad or by a contractor to a railroad to perform any of the duties defined in this subpart.

*Foul or fouling a track* means rolling equipment or on-track maintenance-of-way equipment is located such that the end of the equipment is between the clearance point and the switch points leading to the track on which the equipment is standing.

*FRA* means the Federal Railroad Administration.

*Hand-operated switch* means any type of switch when operated by manual manipulation. For purposes of this subpart, a hand-operated switch does not include switches operated by push button or radio control when such switch is protected by distant switch indicators, switch point indicators, or other visual or audio verification that the switch points are lined for the intended route and fit properly.

*Highway-rail grade crossing* means, for purposes of this subpart only, an at-

grade crossing where a public highway, road, street, or private roadway, including associated sidewalks and pathways, crosses one or more railroad tracks at grade, and is identified by a U.S. DOT National Highway-Rail Grade Crossing Inventory Number, or is marked by crossbucks, stop signs, or other appropriate signage indicating the presence of an at-grade crossing.

*Industry track* means a switching track, or series of tracks, serving the needs of a commercial industry other than a railroad.

*Lite locomotive consist* means two or more locomotive units coupled without cars attached, regardless of whether the locomotive units are connected so that they may be operated from a single control stand.

*Locomotive* means, for purposes of this subpart only, a piece of on-track equipment (other than specialized roadway maintenance equipment or a dual purpose vehicle operating in accordance with § 240.104(a)(2) of this chapter):

(1) With one or more propelling motors designed for moving other equipment;

(2) With one or more propelling motors designed to carry freight or passenger traffic or both; or

(3) Without propelling motors but with one or more control stands.

*Pedestrian crossing* means a separate designated sidewalk or pathway where pedestrians, but not vehicles, cross railroad tracks. Sidewalk crossings contiguous with, or separate but adjacent to, highway-rail grade crossings, are presumed to be part of the highway-rail grade crossings and are *not* considered pedestrian crossings.

*Qualified* means that a person has successfully completed all instruction, training, and examination programs required by the railroad and this subpart and that the person, therefore, has actual knowledge or may reasonably be expected to have knowledge of the subject on which the person is expected to be competent.

*Remote control operator* means a locomotive engineer, as defined in § 240.7 of this chapter, certified by a railroad to operate remote control locomotives pursuant to § 240.107 of this chapter.

*Remote control zone* means one or more tracks within defined limits designated in the timetable special instructions, or other railroad publication, within which remote control locomotives, under certain circumstances specified in this part, may be operated without an employee assigned to protect the pull-out end of

the remote control movement, i.e., the end on which the locomotive is located.

*Roadway maintenance activity* means any work limited to the duties prescribed for a roadway worker by definition in this section, including movement of on-track maintenance-of-way equipment other than locomotives.

*Roadway worker* means any employee of a railroad, or of a contractor to a railroad, whose duties include inspection, construction, maintenance or repair of railroad track, bridges, roadway, signal and communication systems, electric traction systems, roadway facilities or roadway maintenance machinery on or near track or with the potential of fouling a track, and flagmen and watchmen/lookouts as defined in § 214.7 of this chapter.

*Roadway worker in charge* means a roadway worker who is qualified in accordance with § 214.353 of this chapter for the purpose of establishing on-track safety for roadway work groups.

*Siding* means an auxiliary track, adjacent and connected to a main track, used for meeting or passing trains.

*Signaled siding* means a siding within traffic control system (TCS) territory or within interlocking limits where a signal indication authorizes the siding's use.

*Switchtender* means a qualified employee assigned to handle switches at a specific location.

*Track is clear* means:

(1) The portion of the track to be used for the intended movement is unoccupied by rolling equipment, on-track maintenance-of-way equipment, and conflicting on-track movements;

(2) Intervening public highway-rail grade crossings, private highway-rail grade crossings outside the physical confines of a railroad yard, pedestrian crossings outside of the physical confines of a railroad yard, and yard access crossings are protected as follows:

(i) Crossing gates are in the fully lowered position, and are not known to be malfunctioning; or

(ii) A designated and qualified employee is stationed at the crossing and has the ability to communicate with trains; or

(iii) At crossings equipped only with flashing lights or passive warning devices, when it is clearly seen that no traffic is approaching or stopped at the crossing and the leading end of the movement over the crossing does not exceed 15 miles per hour;

(3) Intervening switches and fixed derails are properly lined for the intended movement; and

(4) The portion of the track to be used for the intended movement has sufficient room to contain the rolling equipment being shoved or pushed.

*Yard access crossing* means a private highway-rail grade crossing that is located within the physical confines of a railroad yard and is either:

- (1) Open to unrestricted public access; or
- (2) Open to persons other than railroad employees going about their normal duties, e.g., business guests or family members.

**§ 218.95 Instruction, training, and examination.**

(a) *Program.* Effective July 1, 2008, each railroad shall maintain a written program of instruction, training, and examination of employees for compliance with operating rules implementing the requirements of this subpart to the extent these requirements are pertinent to the employee's duties. If all requirements of this subpart are satisfied, a railroad may consolidate any portion of the instruction, training or examination required by this subpart with the program of instruction required under § 217.11 of this chapter. An employee who successfully completes all instruction, training, and examination required by this written program shall be considered qualified.

(1) The written program of instruction, training, and examination shall address the requirements of this subpart, as well as consequences of noncompliance.

(2) The written program of instruction, training, and examination shall include procedures addressing how the railroad qualifies employees in any technology necessary to accomplish work subject to the requirements of this subpart. Such procedures shall include, but are not limited to, those which explain:

- (i) The purpose for using the technology;
- (ii) How an employee will be expected to use the technology;
- (iii) How to detect malfunctioning equipment or deviations from proper procedures;
- (iv) How to respond when equipment malfunctions or deviations from proper procedures are detected; and
- (v) How to prevent unintentional interference with the proper functioning of the technology.

(3) *Implementation schedule for employees, generally.* Each employee performing duties subject to the requirements in this subpart shall be initially qualified prior to January 1, 2009. Employees hired between April 14, 2008 and January 1, 2009, and all

employees thereafter required to perform duties subject to the requirements in this subpart shall be qualified before performing duties subject to the requirements in this subpart.

(4) After January 1, 2009, no employee shall perform work requiring compliance with the operating rules implementing the requirements of this subpart unless qualified on these rules within the previous three years.

(5) The records of successful completion of instruction, examination and training required by this section shall document qualification of employees under this subpart.

(b) Written records documenting successful completion of instruction, training, and examination of each employee required by this subpart shall be retained at its system headquarters and at the division headquarters for each division where the employee is assigned for three calendar years after the end of the calendar year to which they relate and made available to representatives of the FRA for inspection and copying during normal business hours. Each railroad to which this part applies is authorized to retain a program, or any records maintained to prove compliance with such a program, by electronic recordkeeping in accordance with §§ 217.9(g) and 217.11(c) of this chapter.

(c) Upon review of the program of instruction, training, and examination required by this section, the Associate Administrator for Safety may, for cause stated, disapprove the program. Notification of such disapproval shall be made in writing and specify the basis for the disapproval decision. If the Associate Administrator for Safety disapproves the program,

(1) The railroad has 35 days from the date of the written notification of such disapproval to:

- (i) Amend its program and submit it to the Associate Administrator for Safety for approval; or
- (ii) Provide a written response in support of the program to the Associate Administrator for Safety, who informs the railroad of FRA's final decision in writing; and

(2) A failure to submit the program with the necessary revisions to the Associate Administrator for Safety in accordance with this paragraph will be considered a failure to implement a program under this part.

**§ 218.97 Good faith challenge procedures.**

(a) *Employee Responsibility.* An employee shall inform the railroad or employer whenever the employee makes a good faith determination that

the employee has been directed to either take actions that would violate FRA regulations regarding the handling of equipment, switches, and fixed derails as required by this subpart, or to take actions that would violate the railroad's operating rules implementing the requirements of this subpart.

(b) *General procedures.* Each railroad or employer is responsible for the training of and compliance by its employees with the requirements of this subpart.

(1) Each railroad or employer shall adopt and implement written procedures which guarantee each employee the right to challenge in good faith whether the procedures that will be used to accomplish a specific task comply with the requirements of this subpart or any operating rule relied upon to fulfill the requirements of this subpart. Each railroad or employer's written procedures shall provide for prompt and equitable resolution of challenges made in accordance with this subpart.

(2) The written procedures required by this section shall indicate that the good faith challenge described in paragraph (b)(1) of this section is not intended to abridge any rights or remedies available to the employee under a collective bargaining agreement, or any Federal law including, but not limited to, 29 U.S.C. 651 *et seq.*, 6 U.S.C. 1142, or 49 U.S.C. 20109.

(3) Each affected employee shall be instructed on the written procedures required by this paragraph as part of the training prescribed by § 217.11 of this chapter.

(4) A copy of the current written procedures shall be provided to each affected employee and made available for inspection and copying by representatives of the FRA during normal business hours.

(c) The written procedures shall—

(1) Grant each employee the right to challenge any directive which, based on the employee's good faith determination, would cause the employee to violate any requirement of this subpart or any operating rule relied upon to fulfill the requirements of this subpart;

(2) Provide that the railroad or employer shall not require the challenging employee to comply with the directive until the challenge resulting from the good faith determination is resolved;

(3) Provide that the railroad or employer may require the challenging employee to perform tasks unrelated to the challenge until the challenge is resolved;

(4) Provide that the railroad or employer may direct an employee, other than the challenging employee, to perform the challenged task prior to the challenge being resolved as long as this other employee is informed of the challenge and does not also make a good faith determination that the challenged task would violate FRA regulations regarding the handling of equipment, switches, and fixed derails as required in this subpart, or a railroad's operating rules implementing the requirements of this subpart;

(5) Provide that a challenge may be resolved by:

(i) A railroad or employer officer's acceptance of the employee's request;

(ii) An employee's acceptance of the directive;

(iii) An employee's agreement to a compromise solution acceptable to the person issuing the directive; or

(iv) As further determined under paragraph (d) of this section.

(d) In the event that the challenge cannot be resolved because the person issuing the directive determines that the employee's challenge has not been made in good faith or there is no reasonable alternative to the direct order, the written procedures shall:

(1) Provide for immediate review by at least one officer of the railroad or employer, except for each railroad with less than 400,000 total employee work hours annually. This immediate review shall:

(i) Not be conducted by the person issuing the challenged directive, or that person's subordinate; and

(ii) Provide that a challenge may be resolved by using the same options available for resolving the challenge as the initial officer as well as the option described in paragraph (d)(2) of this section, except that the reviewing officer's decision shall not be subject to further immediate review, unless provided for in the railroad's or employer's written procedures;

(2) Provide that if the officer making the railroad's or employer's final decision concludes that the challenged directive would not cause the employee to violate any requirement of this subpart or the railroad's or employer's operating rule relied upon to fulfill the requirements of this subpart and directs the employee to perform the challenged directive, the officer shall further explain to the employee that Federal law may protect the employee from retaliation if the employee refuses to do the work and if the employee's refusal is a lawful, good faith act;

(3) Provide that the employee be afforded an opportunity to document electronically or in writing any protest

to the railroad or employer's final decision before the tour of duty is complete. The employee shall be afforded the opportunity to retain a copy of the protest;

(4) Provide that the employee, upon written request, has a right to further review by a designated railroad or employer officer, within 30 days after the expiration of the month during which the challenge occurred, for the purpose of verifying the proper application of the regulation, law, procedure or rule in question. The verification decision shall be made in writing to the employee.

(e) *Recordkeeping and record retention.* (1) A copy of the written procedures required by this section shall be retained at the employer or railroad's system headquarters and at each division headquarters, and made available to representatives of the FRA for inspection and copying during normal business hours.

(2) A copy of any written good faith challenge verification decision, made in accordance with paragraph (d)(4) of this section, shall be retained at the employer or railroad's system headquarters and at the division headquarters to which the employee was working when the challenge was initiated, and made available to representatives of the FRA for inspection and copying during normal business hours for at least one calendar year after expiration of the year during which the decision was issued.

(3) Each employer or railroad to which this subpart applies is authorized to retain by electronic recordkeeping the information prescribed in this subpart in accordance with the electronic recordkeeping standards set forth in § 217.9(g)(1) through (5) of this chapter.

#### **§ 218.99 Shoving or pushing movements.**

(a)(1) Each railroad shall adopt and comply with an operating rule which complies with the requirements of this section. When any person including, but not limited to, each railroad, railroad officer, supervisor, and employee violates any requirement of an operating rule which complies with the requirements of this section, that person shall be considered to have violated the requirements of this section.

(2) The following requirements for shoving or pushing movements do not apply to rolling equipment intentionally shoved or pushed to permit the rolling equipment to roll without power attached, i.e., free rolling equipment, during switching activities known as kicking, humping, or dropping cars.

(b) *General movement requirements.*—(1) *Job briefing.* Rolling

equipment shall not be shoved or pushed until the locomotive engineer participating in the move has been briefed by the employee who will direct the move. The job briefing shall include the means of communication to be used between the locomotive engineer and the employee directing the move and how point protection will be provided.

(2) *No unrelated tasks.* During the shoving or pushing movement, the employee directing the movement shall not engage in any task unrelated to the oversight of the shoving or pushing movement.

(3) *Point protection.* When rolling equipment or a lite locomotive consist is shoved or pushed, point protection shall be provided by a crewmember or other qualified employee by:

(i) Visually determining that the track is clear. The determination that the track is clear may be made with the aid of monitored cameras or other technological means, provided that it and the procedures for use provide an equivalent level of protection to that of a direct visual determination by a crewmember or other qualified employee properly positioned to make the observation as prescribed in this section and appendix D to this part; and

(ii) Giving signals or instructions necessary to control the movement.

(c) *Additional requirements for remote control movements.* All remote control movements are considered shoving or pushing movements, except when the remote control operator controlling the movement is riding the leading end of the leading locomotive in a position to visually determine conditions in the direction of movement. In addition to the other requirements of this section,

(1) When initiating a remote control shoving or pushing movement:

(i) The remote control operator shall visually determine the direction the equipment moves; or

(ii) A member of the crew shall visually determine the direction the equipment moves and confirm the direction with the remote control operator. If no confirmation is received, the movement shall be immediately stopped; and

(2) If technology is relied upon, whether primarily or as a safeguard, to provide pull-out protection by preventing the movement from exceeding the limits of a remote control zone, the technology shall be demonstrated

(i) To be failsafe; or

(ii) To provide suitable redundancy to prevent unsafe failure.

(d) *Remote control zone, exception to track is clear requirements.* After an

initial track is clear determination has been made in an activated remote control zone, it is not necessary to make a new determination prior to each subsequent shoving or pushing movement provided that:

(1) The controlling locomotive of the remote control movement is on the leading end in the direction of movement, i.e., the movement occurs on the pull-out end;

(2) The remote control zone is not jointly occupied; and

(3) The initial determination was made by a crewmember of either:

(i) The remote control crew;

(ii) A relieved remote control crew who has transferred the remote control zone directly to the relieving crew; or

(iii) The last jointly occupying crew who directly communicates, i.e., not through a third party, to a remote control crewmember that the remote control zone is no longer jointly occupied and meets the requirements for track is clear.

(e) *Operational exceptions.* A railroad does not need to comply with paragraphs (b) through (d) of this section in the following circumstances:

(1) Push-pull operations when operated from the leading end in the direction of movement, i.e., push mode;

(2) Shoving or pushing operations with manned helper locomotives or distributed power locomotives assisting a train when the train is being operated from the leading end in the direction of movement;

(3) During the performance of roadway maintenance activity under the direct control of a roadway worker performing work in accordance with railroad operating rules specific to roadway workers; or

(4) When the leading end of a shoving movement is on a main track or signaled siding, under the following conditions:

(i) The train dispatcher gives authority or permission to make the movement and verifies that:

(A) Another movement or work authority is not in effect within the same or overlapping limits unless conflicting movements are protected; and

(B) A main track is not removed from service by a work authority within the same or overlapping limits;

(ii) Movement is limited to the train's authority;

(iii) Movement shall not be made into or within yard limits, restricted limits, drawbridges, or work authority limits;

(iv) Movement shall not enter or foul a highway-rail grade crossing or pedestrian crossing except when:

(A) Crossing gates are in the fully lowered position; or

(B) A designated and qualified employee is stationed at the crossing and has the ability to communicate with trains; or

(C) At crossings equipped only with flashing lights or passive warning devices, when it is clearly seen that no traffic is approaching or stopped at the crossing and the leading end of the movement over the crossing does not exceed 15 miles per hour; and

(v) Movement shall not be made into or within interlocking limits or controlled point limits unless the following conditions are met:

(A) The signal governing movement is more favorable than restricting aspect;

(B) Each signal governing movement into and through interlocking limits or controlled point limits shall be continuously observed by a member of that crew who is in a position to determine that the train's movement has occupied the circuit controlling that signal as evidenced by that signal assuming its most restrictive aspect; and

(C) The movement does not exceed the train's length.

**§ 218.101 Leaving rolling and on-track maintenance-of-way equipment in the clear.**

(a) Each railroad shall adopt and comply with an operating rule which complies with the requirements of this section. When any person including, but not limited to, each railroad, railroad officer, supervisor, and employee violates any requirement of an operating rule which complies with the requirements of this section, that person shall be considered to have violated the requirements of this section.

(b) Rolling and on-track maintenance-of-way equipment shall not be left where it will foul a connecting track unless:

(1) The equipment is standing on a main track and a siding track switch that the equipment is fouling is lined for the main track on which the equipment is standing; or

(2) The equipment is standing on a siding and a main track switch that the equipment is fouling is lined for the siding on which the equipment is standing; or

(3) The equipment is standing on a yard switching lead track, and the yard track switch that the equipment is fouling is lined for the yard switching lead track on which the equipment is standing; or

(4) The equipment is on an industry track beyond the clearance point of the switch leading to the industry.

(c) Each railroad shall implement procedures that enable employees to identify clearance points and a means to identify locations where clearance

points will not permit a person to safely ride on the side of a car.

**§ 218.103 Hand-operated switches, including crossover switches.**

(a)(1) Each railroad shall adopt and comply with an operating rule which complies with the requirements of this section. When any person including, but not limited to, each railroad, railroad officer, supervisor, and employee violates any requirement of an operating rule which complies with the requirements of this section, that person shall be considered to have violated the requirements of this section.

(2) Each railroad shall specify minimum requirements necessary for an adequate job briefing.

(b) *General.* Employees operating or verifying the position of a hand-operated switch shall:

(1) Conduct job briefings, before work is begun, each time a work plan is changed, and at completion of the work;

(2) Be qualified on the railroad's operating rules relating to the operation of the switch;

(3) Be individually responsible for the position of the switch in use;

(4) Visually determine that switches are properly lined for the intended route and that no equipment is fouling the switches;

(5) Visually determine that the points fit properly and the target, if so equipped, corresponds with the switch's position;

(6) After operating a switch and before making movements in either direction over the switch, ensure that the switch is secured from unintentional movement of the switch points;

(7) Ensure that a switch is not operated while rolling and on-track maintenance-of-way equipment is fouling the switch, or standing or moving over the switch; and

(8) After operating a switch, ensure that when not in use, each switch is locked, hooked, or latched, if so equipped.

(c) Rolling and on-track maintenance-of-way equipment shall not foul a track until all hand-operated switches connected with the movement are properly lined, or in the case of hand-operated switches designed and permitted to be trailed through, until the intended route is seen to be clear or the train has been granted movement authority. When a conflicting movement is approaching a hand-operated switch, the track shall not be fouled or the switch operated.

(d) When rolling and on-track maintenance-of-way equipment has entered a track, the hand-operated switch to that track shall not be lined

away from the track until the equipment has passed the clearance point of the track.

**§ 218.105 Additional operational requirements for hand-operated main track switches.**

(a) Each railroad shall adopt and comply with an operating rule which complies with the requirements of this section. When any person including, but not limited to, each railroad, railroad officer, supervisor, and employee violates any requirement of an operating rule which complies with the requirements of this section, that person shall be considered to have violated the requirements of this section.

(b) *Designating switch position.* The normal position of a hand-operated main track switch shall be designated by the railroad in writing and the switch shall be lined and locked in that position when not in use except when:

(1) The train dispatcher directs otherwise with respect to the position of a hand-operated main track switch and the necessary protection is provided; or

(2) The hand-operated switch is left in the charge of a crewmember of another train, a switchtender, or a roadway worker in charge.

(c) *Additional job briefing requirements for hand-operated main track switches.*

(1) Before a train or a train crew leaves the location where any hand-operated main track switch was operated, all crewmembers shall have verbal communication to confirm the position of the switch.

(2) In the case of exclusive track occupancy authority established under § 214.321, foul time under § 214.323, or train coordination under § 214.325, when a roadway worker qualified to operate hand-operated main track switches is granted permission by the roadway worker in charge to occupy or otherwise use the limits of the exclusive track occupancy, such employee receiving permission to occupy the working limits shall report the position of any such switches operated upon expiration of the authority limits to the roadway worker in charge or to a designated intermediary employee who shall convey the switch position to the roadway worker in charge.

(d) *Releasing Authority Limits.* In non-signalized territory, before an employee releases the limits of a main track authority and a hand-operated switch is

used to clear the main track, and, prior to departing the switch's location, the following conditions are required:

(1) The employee releasing the limits, after conducting a job briefing in accordance with this subpart, shall report to the train dispatcher that the hand-operated main track switch has been restored to its normal position and locked, unless the train dispatcher directs that the hand-operated main track switch be left lined and locked in the reverse position and the necessary protection is provided;

(2) If the report of the switch position is correct, the train dispatcher shall repeat the reported switch position information to the employee releasing the limits and ask whether that is correct; and

(3) The employee releasing the limits shall then confirm to the train dispatcher that this information is correct.

**§ 218.107 Additional operational requirements for hand-operated crossover switches.**

(a) Each railroad shall adopt and comply with an operating rule which complies with the requirements of this section. When any person including, but not limited to, each railroad, railroad officer, supervisor, and employee violates any requirement of an operating rule which complies with the requirements of this section, that person shall be considered to have violated the requirements of this section.

(b) *Hand-operated crossover switches, generally.* Both hand-operated switches of a crossover shall be properly lined before rolling and on-track maintenance-of-way equipment begins a crossover movement. A crossover movement shall be completed before either hand-operated crossover switch is restored to normal position.

(c) *Correspondence of hand-operated crossover switches.* Hand-operated crossover switches shall be left in corresponding position except when:

(1) Used to provide blue signal protection under § 218.27 of this part; or

(2) Used for inaccessible track protection under § 214.327 of this chapter; or

(3) Performing maintenance, testing or inspection of crossover switches in traffic control system (TCS) territory; or

(4) One crew is using both tracks connected by the crossover during continuous switching operations.

**§ 218.109 Hand-operated fixed derails.**

(a)(1) Each railroad shall adopt and comply with an operating rule which complies with the requirements of this section. When any person including, but not limited to, each railroad, railroad officer, supervisor, and employee violates any requirement of an operating rule which complies with the requirements of this section, that person shall be considered to have violated the requirements of this section.

(2) Each railroad shall specify minimum requirements necessary for an adequate job briefing.

(b) *General.* (1) The normal position of fixed derails is in the derailing position except as provided in part 218, subpart B of this chapter, or the railroad's operating rules or special instructions.

(2) Fixed derails shall be kept in the derailing position whether or not any rolling and on-track maintenance-of-way equipment is on the tracks they protect, except as provided in paragraph (b)(1) of this section or when changed to permit movement.

(3) Movement must not be made over a fixed derail in the derailing position.

(c) Employees operating or verifying the position of a fixed derail shall:

(1) Conduct job briefings, before work is begun, each time a work plan is changed, and at completion of the work;

(2) Be qualified on the railroad's operating rules relating to the operation of the derail;

(3) Be individually responsible for the position of the derail in use;

(4) Determine that the target, if so equipped, corresponds with the derail's position;

(5) Determine that the derail is secured by:

(i) Placing the throw lever in the latch stand, if so equipped;

(ii) Placing the lock or hook in the hasp, if so equipped; and

(iii) Testing such latches, locks or hooks; and

(6) Ensure that when not in use, derails are locked, hooked, or latched in the normal position if so equipped.

■ 12. Appendix A to part 218 is amended by adding entries for subpart F, consisting of §§ 218.95, 218.97, 218.99, 218.101, 218.103, 218.105, 218.107 and 218.109, to read as follows:

APPENDIX A TO PART 218—SCHEDULE OF CIVIL PENALTIES

Section	Violation	Willful violation
Subpart F—Handling Equipment, Switches and Derails: 218.95 Instruction, Training, and Examination:		
(a) Program .....	9,500–12,500	13,000–16,000
(b) Records .....	7,500	11,000
(c) Failure to timely or appropriately amend program after disapproval .....	9,500–12,500	13,000–16,000
218.97 Good Faith Challenge Procedures:		
(a) Employee Responsibility Failure .....		5,000
(b) through (d) Failure to adopt or implement procedures .....	7,500	
218.99 Shoving or Pushing Movements:		
(a) Failure to implement required operating rule .....	9,500	
(b) Failure to conduct job briefing, use a qualified employee, or establish proper protection .....	7,500–9,500	11,000–13,000
(c) Failure to observe equipment direction .....	9,500	13,000
(d) Failure to properly establish point protection within a remote control zone .....	9,500	13,000
(e) Failure to abide by operational exception requirements .....	9,500	13,000
218.101 Leaving Equipment in the Clear:		
(a) Failure to implement required operating rule .....	9,500	
(b) Equipment left improperly fouling .....	9,500	13,000
(c) Failure to implement procedures for identifying clearance points .....	9,500	13,000
218.103 Hand-operated switches, including crossover switches:		
(a) Failure to implement required operating rule .....	9,500	
(b) through (d) Railroad and employee failures .....	7,500	
218.105 Additional operational requirements for hand-operated main track switches:		
(a) Failure to implement required operating rule .....	9,500	
(b) and (c) Railroad and employee failures .....	7,500	11,000
(d) Failure to properly release authority limits .....	12,500	
218.107 Additional operational requirements for hand-operated crossover switches:		
(a) Failure to implement required operating rule .....	9,500	
(b) and (c) Railroad and employee failures .....	7,500	11,000
218.109 Hand-operated fixed derails:		
(a) Failure to implement required operating rule .....	9,500	13,000
(b) and (c) Railroad and employee failures .....	7,500	11,000

■ 13. Appendix D to Part 218 is added to read as follows:

**Appendix D to Part 218—Requirements and Considerations for Implementing Technology Aided Point Protection**

**Introduction**

This appendix provides further explanation and requirements for exercising the option to provide point protection with the aid of technology as permitted in § 218.99(b)(3)(i). The regulation permits the visual determination necessary to provide point protection, i.e., a determination that the track is clear, for a shoving or pushing movement to “be made with the aid of monitored cameras or other technological means, provided that it and the procedures for use provide an equivalent level of protection to that of a direct visual determination by a crewmember or other qualified employee properly positioned to make the observation as prescribed in this section and appendix D to this part.” This appendix addresses the general requirements and considerations for all technology aided point protection as well as specific additional requirements for those operations involving remote control operations at public highway-rail grade crossings, private highway-rail grade crossings outside the physical confines of a railroad yard, pedestrian crossings outside the physical confines of a railroad yard, and yard Access Crossings.

**I. General Requirements and Considerations**

A. Although railroading is now one of the nation’s older forms of mechanized transportation, equipment, components and operations all have evolved through new and improved technologies. Installing cameras in yards so that a location could be remotely monitored from somewhere else has become a railroading reality as cameras have become smaller, less expensive, and have increased resolution. It is possible to set up these cameras and monitors so that they provide at least an equivalent level of safety to that of an employee protecting the point. Part 218, subpart F permits such an operation to substitute for an employee’s direct visual determination where the technology provides an equivalent level of protection to that of a direct visual determination. See § 218.99(b)(3)(i). Of course, to provide an equivalent level of protection, an employee needs to be properly qualified (see § 218.95(a)(2)) and the technology must work as intended. Most malfunctions of the technology should be detectable, and result in abandoning the use of the technology for determining point protection until the malfunction can be corrected.

B. The substitution of such technology for a direct visual determination is dependent on many factors. Each situation will have its own particular factual circumstances that shall require consideration in determining whether an equivalent level of safety can be achieved. For instance, with regard to the basic camera setup, a railroad shall consider whether an operator must see in color

(largely a necessity if viewing signals), the width of the angle of view, the size and location of the monitor, whether the technology is for day-time use only, and whether its use should be limited to fair weather conditions. However, under all circumstances, the monitor shall display sufficient information to enable the viewer to make a determination that the track ahead of the shoving or pushing move is clear pursuant to the definition of “track is clear” in § 218.93.

C. Each railroad that chooses to implement such camera/monitor setups shall implement attendant procedures and qualify each employee who will be utilizing the technology. Railroads shall ensure that any monitored camera has sufficient resolution and real time coverage to provide protection equal to a direct visual determination. See § 218.99(b)(3)(i). Concerning attendant procedures, one such procedure may be for an employee viewing a monitor to communicate updates to the locomotive engineer or controlling crewmember at appropriate intervals. FRA equates the employee monitoring the camera to the employee controlling the movement who must not engage in any task unrelated to the oversight of the movement; thus, each railroad utilizing such cameras shall implement attendant procedures limiting any of the monitoring employee’s ancillary duties that might distract from the employee’s ability to visually determine that the track is clear and provide continuous communication to the employee controlling the movement.

D. There is also the consideration of whether the person viewing the monitor is

the locomotive engineer, remote control operator, other crewmember or other qualified person, such as a yardmaster. If the monitor is not being viewed by the operator who is controlling the movement, then, there shall be a clear understanding and channel of communication between the operator and the employee who is viewing the monitor—as the latter would be protecting the movement. Providing an equivalent level of protection to that of a direct visual determination requires a thorough job briefing in which there is an understanding of who is observing the movement, what is the observer's range of vision, at what locomotive speed can the observation be made and how information will be conveyed to the operator/engineer, if that person is not the one viewing the monitor.

E. There may be occasions when a railroad finds it advantageous to use a non-crewmember, e.g., a yardmaster, to provide point protection, line switches, or check the status of a derail for a remote control crew; however, several potential problems may result when non-crewmembers are used to carry out some crewmember functions. Of foremost concern is the great potential for an error in communication or a misunderstanding between the non-crewmember and the crewmembers regarding the activity or status of equipment. A yardmaster who is occupied with his or her other responsibilities might not give the task the attention it deserves, or could be distracted and give an incorrect answer to a question by a crewmember (e.g., "is the move lined?"). The result could be that the task does not get completed or there is an error in task execution. Further, the crewmembers might not have any alternative way of determining that there is a problem with the point protection provided by the non-crewmember until it is too late. Consequently, to the extent they will be called upon to perform these duties, each railroad shall include yardmasters and other non-crewmembers in any operating rule promulgated in accordance with § 218.99(b)(2).

### **II. Additional Requirements for Remote Control Locomotive Operations at Highway-Rail Grade Crossings, Pedestrian Crossings, and Yard Access Crossings**

A. In addition to the general requirements and considerations for all technology aided point protection in lieu of direct visual determinations, additional requirements are necessary to address concerns specific to the use of camera/monitor setups for remote control locomotive operations to protect the point at highway-rail grade crossings, pedestrian crossings, and yard access crossings. Railroad operating rules currently permit a movement to travel over a crossing without the physical presence of a crewmember if a crossing is equipped with gates, if it can be determined that the gates are in the fully lowered position, and if the crossing is clear of vehicles and pedestrians. Remote control movements at highway-rail grade crossings, pedestrian crossings, and yard access crossings that utilize camera/monitor setups pose a greater direct risk to members of the general public than yard

movements utilizing camera/monitor setups to check whether a track is clear. In addition, such setups can rapidly develop problems with motor vehicles and pedestrians unaccustomed to railroad operating rules and procedures. For these reasons, additional safeguards are necessary.

B. In consideration of the dangers posed by the use of camera/monitor setups for remote control locomotive operations at highway-rail grade crossings, pedestrian crossings, and yard access crossings, the following procedures shall be complied with in order to establish an equivalent means of safety in accordance with § 218.99(b)(3)(i):

1. Before camera-assisted remote control locomotive operations are permitted at highway-rail grade crossings, pedestrian crossings, and yard access crossings, a Crossing Diagnostic Team shall evaluate the crossing. The diagnostic team shall have representatives from the railroad, FRA, the State department of transportation (or another State agency having jurisdiction over the highway-rail grade crossing, pedestrian crossing, or yard access crossing), and local government authorities. The diagnostic team shall evaluate the suitability of each crossing for remote camera operations. Among the factors it shall consider are the following: the average annual daily traffic counts; the number of highway lanes; highway speed limits; the presence of adjacent signalized highway intersections; the number of railroad tracks; the angle of the roadway intersection; the volume of school bus, transit bus, emergency vehicle, commercial motor vehicle, and hazardous materials traffic over the crossing; the minimum remote control locomotive operator sight distances of roadway approaches to the crossing; and other relevant factors that could affect the safety of the crossing. The diagnostic team shall also consider the appropriate number of cameras and appropriate camera angles needed to provide for the remote operation of remote control locomotives over the crossing. The diagnostic team shall agree to a written diagnostic evaluation summary of the factors considered and shall provide the railroad with agreed upon parameters by which the camera-assisted remote control operation may continue in operation if the factors required for suitability change; thus, any change in the factors considered by the diagnostic team outside of the acceptable parameters shall require the railroad to receive a revised evaluation approval from a diagnostic team before continuing any such operation. In addition, any of the Federal, State, or local governmental authorities may trigger review of a prior evaluation approval at any time there is a question of the suitability of the operation. It is possible that, of the requirements listed below, requirements numbered 2, 4, 5, and 6 would be unnecessary at highway-rail grade crossings or yard access crossings equipped with approved supplemental safety devices (see 49 CFR part 222, app. A) that prevent motorists from driving around lowered gates; under such circumstances, the diagnostic team shall make such determinations. If a Crossing Diagnostic Team, as described in this paragraph, evaluated a crossing for the factors described herein, prior to April 14,

2008, another diagnostic team evaluation is not required to comply with this rule; however, the requirements listed below shall still apply to any such remotely controlled movements over that crossing.

2. Camera-assisted remote control locomotive operations shall only be permitted at crossings equipped with flashing lights, gates, and constant warning time train detection systems where appropriate, based on train speeds.

3. A crewmember or other qualified employee shall not view the monitor in place of the remote control operator, as is permitted for other shoving or pushing movements. See § 218.99(b)(3). For purposes of remote control locomotive operations with camera/monitor setups to protect the point at highway-rail grade crossings, pedestrian crossings, and yard access crossings, the remote control operator controlling the movement shall view the monitor during such operations.

4. The cameras shall be arranged to give the remote control locomotive operator controlling the movement a view of the rail approaches to the crossing from each direction so that the operator can accurately judge the end of the movement's proximity to the crossing.

5. The cameras shall be arranged to give the remote control locomotive operator a clear view to determine the speed and driver behavior (e.g., driving erratically) of any approaching motor vehicles.

6. Either the camera resolution shall be sufficient to determine whether the flashing lights and gates are working as intended or the crossing shall be equipped with a remote health monitoring system that is capable of notifying the remote control locomotive operator immediately if the flashing lights and gates are not working as intended.

7. The railroad shall notify the Associate Administrator for Safety in writing when this type of protection has been installed and activated at a crossing.

### **III. Conclusion**

The technology used to aid point protection will undoubtedly develop and improve over time. FRA encourages the use and development of this technology as is evidenced by the option in this rule to utilize such technology. Meanwhile, as a regulating body, FRA cannot determine whether a new technology to aid point protection provides an equivalent level of protection to that of a direct visual determination unless we are made aware of the new technology. Consequently, aside from the camera/monitor setups described in this appendix, each railroad that intends to implement a technology used to aid point protection shall notify the Associate Administrator for Safety in writing of the technology to be used prior to implementation.

Issued in Washington, DC, on January 29, 2008.

**Joseph H. Boardman,**  
*Administrator.*

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