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## **Title 49 —Transportation**

### **Subtitle B —Other Regulations Relating to Transportation**

#### **Chapter II —Federal Railroad Administration, Department of Transportation**

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## PART 218—RAILROAD OPERATING PRACTICES

**Authority:** 49 U.S.C. 20103, 20107, 20131, 20138, 20144, 20168; 28 U.S.C. 2461 note; and 49 CFR 1.89.

**Source:** 44 FR 2175, Jan. 10, 1979, unless otherwise noted.

### Subpart A—General

#### § 218.1 Purpose.

This part prescribes minimum requirements for railroad operating rules and practices. Each railroad may prescribe additional or more stringent requirements in its operating rules, timetables, timetable special instructions, and other special instructions.

#### § 218.3 Application.

- (a) Except as provided in paragraph (b) of this section, this part applies to railroads that operate rolling equipment on standard gage track which is part of the general railroad system of transportation.
- (b) This part does not apply to—
  - (1) A railroad that operates only on track inside an installation which is not part of the general railroad system of transportation, or
  - (2) Rapid transit operations in an urban area that are not connected with the general railroad system of transportation.

[44 FR 2175, Jan. 10, 1979, as amended at 53 FR 28599, July 28, 1988]

#### § 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.

[73 FR 8498, Feb. 13, 2008]

## § 218.5 Definitions.

**Absolute block** means a block in which no train is permitted to enter while it is occupied by another train.

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

**Blue signal** means a clearly distinguishable blue flag or blue light by day and a blue light at night. When attached to the operating controls of a locomotive, it need not be lighted if the inside of the cab area of the locomotive is sufficiently lighted so as to make the blue signal clearly distinguishable.

**Camp car** means any on-track vehicle, including outfit, camp, or bunk cars or modular homes mounted on flat cars used to house rail employees. It does not include wreck trains.

**Car shop repair track area** means one or more tracks within an area in which the testing, servicing, repair, inspection, or rebuilding of railroad rolling equipment is under the exclusive control of mechanical department personnel.

**Controlling locomotive** means a locomotive arranged as having the only controls over all electrical, mechanical and pneumatic functions for one or more locomotives, including controls transmitted by radio signals if so equipped. It does not include two or more locomotives coupled in multiple which can be moved from more than one set of locomotive controls.

**Designated crew member** means an individual designated under the railroad's operating rules as the point of contact between a train or yard crew and a utility employee working with that crew.

**Effective locking device** when used in relation to a manually operated switch or a derail means one which is:

- (1) Vandal resistant;
- (2) Tamper resistant; and
- (3) Capable of being locked and unlocked only by the class, craft or group of employees for whom the protection is being provided.

**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.

**FTA** means the Federal Transit Administration.

**Group of workers** means two or more workers of the same or different crafts assigned to work together as a unit under a common authority and who are in communication with each other while the work is being done.

**Hazard** means an existing or potential condition that could lead to an unplanned event or series of events that can result in an accident or incident (*i.e.*, mishap); injury, illness, or death; damage to or loss of a system, equipment, or property; or damage to the environment.

**Helper service train operation** means the train is a locomotive or group of locomotives being used to assist another train that has incurred mechanical failure or lacks sufficient tractive force necessary to traverse a particular section of track due to train tonnage and the grade of the terrain.

**Interlocking limits** means the tracks between the opposing home signals of an interlocking.

**Lite locomotive train operation** means the train is a locomotive or a consist of locomotives not attached to any piece of equipment or attached only to a caboose.

**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.

**Locomotive, MU** means rail rolling equipment self-propelled by any power source and intended to provide transportation for members of the general public.

**Locomotive servicing track area** means one or more tracks, within an area in which the testing, servicing, repair, inspection, or rebuilding of locomotives is under the exclusive control of mechanical department personnel.

**Main track** means a track, other than an auxiliary track, extending through yards or between stations, upon which trains are operated by timetable or train order or both, or the use of which is governed by a signal system.

**Mishap** means an event or condition or series of events or conditions resulting in an accident or incident.

**One-person train crew** means either:

- (1) One railroad employee is assigned a train as a train crew, and that single assigned person is performing the duties of both the locomotive engineer and the conductor; or
- (2) More than one railroad employee is assigned a train as a train crew, but only a single assigned person, who is performing the duty of the locomotive engineer, is traveling on the train when the train is moving, and the remainder of the train crew, that would include the conductor if the locomotive engineer is not the assigned conductor, is assigned to intermittently assist the train's movements.

**One-person train crewmember** means, in the context of a one-person train crew operation, the single assigned person who is performing the duty of the locomotive engineer and is traveling in the operating cab of the controlling locomotive when the train is moving.

**Risk** means the combination of the expected probability (or frequency of occurrence) and the consequence (or severity) of a hazard.

**Risk assessment** means the process of determining, either quantitatively or qualitatively, or both, the level of risk associated with train operations with a one-person train crew, compared to operations with a two-person (or larger) crew, under all operating conditions.

**Rolling equipment** includes locomotives, railroad cars, and one or more locomotives coupled to one or more cars.

**Switch providing access** means a switch which if traversed by rolling equipment could permit that rolling equipment to couple to the equipment being protected.

**Switching service or switching operation** means classifying rail cars according to commodity or destination; assembling of cars for train movements; changing the position of cars for purposes of loading, unloading, or weighing; placing locomotives and cars for repair or storage; or moving of rail equipment in connection with work service that does not constitute a train movement.

**Tourist train operation** means a tourist, scenic, historic, or excursion train operation.

**Tourist train operation that is not part of the general railroad system of transportation** means a tourist, scenic, historic, or excursion train operation conducted only on track used exclusively for that purpose (*i.e.*, there is no freight, intercity passenger, or commuter passenger railroad operation on the track).

**Trailing tons** means the sum of the gross weights—expressed in tons—of the cars and the locomotives in a train that are not providing propelling power to the train.

**Train** means one or more locomotives coupled with or without cars, except during switching service.

**Train or yard crew** means one or more railroad employees assigned a controlling locomotive, under the charge and control of one crew member; called to perform service covered by Section 2 of the Hours of Service Act; involved with the train or yard movement of railroad rolling equipment they are to work with as an operating crew; reporting and working together as a unit that remains in close contact if more than one employee; and subject to the railroad operating rules and program of operational tests and inspections required in §§ 217.9 and 217.11 of this chapter.

**Unit freight train** means a freight train composed of cars carrying a single type of commodity.

**Utility employee** means a railroad employee assigned to and functioning as a temporary member of a train or yard crew whose primary function is to assist the train or yard crew in the assembly, disassembly or classification of rail cars, or operation of trains (subject to the conditions set forth in § 218.22 of this chapter).

**Worker** means any railroad employee assigned to inspect, test, repair, or service railroad rolling equipment, or their components, including brake systems. Members of train and yard crews are excluded except when assigned such work on railroad rolling equipment that is not part of the train or yard movement they have been called to operate (or been assigned to as "utility employees"). Utility employees assigned to and functioning as temporary members of a specific train or yard crew (subject to the conditions set forth in § 218.22 of this chapter), are excluded only when so assigned and functioning.

Note: Servicing does not include supplying cabooses, locomotives, or passenger cars with items such as ice, drinking water, tools, sanitary supplies, stationery, or flagging equipment.

Testing does not include (i) visual observations made by an employee positioned on or alongside a caboose, locomotive, or passenger car; or (ii) marker inspections made in accordance with the provisions of § 221.16(b) of this chapter.

[58 FR 43292, Aug. 16, 1993, as amended at 60 FR 11049, Mar. 1, 1995; 73 FR 8498, Feb. 13, 2008; 89 FR 25108, Apr. 9, 2024]

## § 218.7 Waivers.

- (a) A railroad may petition the Federal Railroad Administration for a waiver of compliance with any requirement prescribed in this part.

- (b) Each petition for a waiver under this section must be filed in the manner and contain the information required by part 211 of this chapter.
- (c) If the Administrator finds that waiver of compliance is in the public interest and is consistent with railroad safety, he may grant the waiver subject to any conditions he deems necessary. Notice of each waiver granted, including a statement of the reasons, therefore, is published in the FEDERAL REGISTER.

### § 218.9 Civil penalty.

Any person (an entity of any type covered under 1 U.S.C. 1, including but not limited to the following: a railroad; a manager, supervisor, official, or other employee or agent of a railroad; any owner, manufacturer, lessor, or lessee of railroad equipment, track, or facilities; any independent contractor providing goods or services to a railroad; and any employee of such owner, manufacturer, lessor, lessee, or independent contractor) who violates any requirement of this part or causes the violation of any such requirement is subject to a civil penalty of at least \$1,114 and not more than \$36,439 per violation, except that: Penalties may be assessed against individuals only for willful violations, and, where a grossly negligent violation or a pattern of repeated violations has created an imminent hazard of death or injury to persons, or has caused death or injury, a penalty not to exceed \$145,754 per violation may be assessed. Each day a violation continues shall constitute a separate offense. See FRA's website at [www.fra.dot.gov](http://www.fra.dot.gov) for a statement of agency civil penalty policy.

[53 FR 28599, July 28, 1988]

**Editorial Note:** For FEDERAL REGISTER citations affecting § 218.9, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at [www.govinfo.gov](http://www.govinfo.gov).

### § 218.11 Filing, testing, and instruction.

The operating rules prescribed in this part, and any additional or more stringent requirements issued by a railroad in relation to the operating rules prescribed in this part, shall be subject to the provisions of part 217 of this chapter, Railroad Operating Rules: Filing, Testing, and Instruction.

## Subpart B—Blue Signal Protection of Workers

### § 218.21 Scope.

This subpart prescribes minimum requirements for the protection of railroad employees engaged in the inspection, testing, repair, and servicing of rolling equipment whose activities require them to work on, under, or between such equipment and subjects them to the danger of personal injury posed by any movement of such equipment.

### § 218.22 Utility employee.

- (a) A utility employee shall be subject to the Hours of Service Act, and the requirements for training and testing, control of alcohol and drug use, and hours of service record keeping provided for in parts 217, 219, and 228 of this chapter.
- (b) A utility employee shall perform service as a member of only one train or yard crew at any given time. Service with more than one crew may be sequential, but not concurrent.
- (c) A utility employee may be assigned to and serve as a member of a train or yard crew without the protection otherwise required by subpart B of part 218 of this chapter only under the following conditions:

- (1) The train or yard crew is assigned a controlling locomotive that is under the actual control of the assigned locomotive engineer of that crew;
  - (2) The locomotive engineer is in the cab of the controlling locomotive, or, while the locomotive is stationary be replaced in the cab by another member of the same crew;
  - (3) The utility employee established communication with the crew by contacting the designated crew member on arriving at the train (as defined for the purpose of this section as one or more locomotives coupled, with or without cars) and before commencing any duties with the crew.
  - (4) Before each utility employee commences duties, the designated crew member shall provide notice to each crew member of the presence and identity of the utility employee. Once all crew members have acknowledged this notice, the designated crew member shall advise the utility employee that he or she is authorized to work as part of the crew. Thereafter, communication shall be maintained in such a manner that each member of the train or yard crew understands the duties to be performed and whether those duties will cause any crew member to go on, under, or between the rolling equipment; and
  - (5) The utility employee is performing one or more of the following functions: Set or release handbrakes; couple or uncouple air hoses and other electrical or mechanical connections; prepare rail cars for coupling; set wheel blocks or wheel chains; conduct air brake test to include cutting air brake components in or out and position retaining valves; inspect, test, install, remove or replace a rear end marking device or end of train device; or change batteries on the rear end marking device or the end of train device if the change may be accomplished without the use of tools. Under all other circumstances, a utility employee working on, under, or between railroad rolling equipment must be provided with blue signal protection in accordance with §§ 218.23 through 218.30 of this part.
- (d) When the utility employee has ceased all work in connection with that train and is no longer on, under, or between the equipment, the utility employee shall notify the designated crew member. The designated crew member shall then provide notice to each crew member that the utility employee is being released from the crew. Once each crew member has acknowledged the notice, the designated crew member shall then notify the utility employee that he is released from the train or yard crew.
  - (e) Communications required by § 218.22(c)(4) and (d) shall be conducted between the utility employee and the designated crew member. This communications shall be conducted either through direct verbal contact, by radio in compliance with part 220 of this chapter, or by oral telecommunication of equivalent integrity.
  - (f) No more than three utility employees may be attached to one train or yard crew at any given time.
  - (g) Any railroad employee who is not assigned to a train or yard crew, or authorized to work with a crew under the conditions set forth by paragraph (b) of this section, is a worker required to be provided blue signal protection in accordance with §§ 218.23 through 218.30 of this part.
  - (h) Nothing in this section shall affect the alternative form of protection specified in § 221.16 of this chapter with respect to inspection of rear end marking devices.

[58 FR 43293, Aug. 16, 1993, as amended at 60 FR 11050, Mar. 1, 1995; 85 FR 80569, Dec. 11, 2020]



### § 218.23 Blue signal display.

- (a) Blue signals displayed in accordance with § 218.25, 218.27, or 218.29 signify that workers are on, under, or between rolling equipment. When so displayed—
  - (1) The equipment may not be coupled to;
  - (2) The equipment may not be moved, except as provided for in § 218.29;
  - (3) Other rolling equipment may not be placed on the same track so as to reduce or block the view of a blue signal, except as provided for in § 218.29 (a), (b) and (c); and
  - (4) Rolling equipment may not pass a displayed blue signal.
- (b) Blue signals must be displayed in accordance with § 218.25, 218.27, or 218.29 by each craft or group of workers prior to their going on, under, or between rolling equipment and may only be removed by the same craft or group that displayed them.

### § 218.24 One-person crew.

- (a) An engineer working alone as a one-person crew shall not perform duties on, under, or between rolling equipment, without blue signal protection that complies with § 218.27 or § 218.29, unless the duties to be performed are listed in § 218.22(c)(5) and the following protections are provided:
  - (1) Each locomotive in the locomotive engineer's charge is either:
    - (i) Coupled to the train or other railroad rolling equipment to be assisted; or
    - (ii) Stopped a sufficient distance from the train or rolling equipment to ensure a separation of at least 50 feet; and
  - (2) Before a controlling locomotive is left unattended, the one-member crew shall secure the locomotive as follows:
    - (i) The throttle is in the IDLE position;
    - (ii) The generator field switch is in the OFF position;
    - (iii) The reverser handle is removed (if so equipped);
    - (iv) The isolation switch is in the ISOLATE position;
    - (v) The locomotive independent (engine) brake valve is fully applied;
    - (vi) The hand brake on the controlling locomotive is fully applied (if so equipped); and
    - (vii) A bright orange engineer's tag (a tag that is a minimum of three by eight inches with the words ASSIGNED LOCOMOTIVE—DO NOT OPERATE) is displayed on the control stand of the controlling locomotive.
- (b) When assisting another train or yard crew with the equipment the other crew was assigned to operate, a single engineer must communicate directly, either by radio in compliance with part 220 of this chapter or by oral telecommunication of equivalent integrity, with the crew of the train to be assisted. The crews of both trains must notify each other in advance of all moves to be made by their respective equipment. Prior to attachment or detachment of the assisting locomotive(s), the crew of the train to be assisted must inform the single engineer that the train is secured against movement. The crew of the train to be assisted must not move the train or permit the train to move until authorized by the single engineer.

[60 FR 11050, Mar. 1, 1995]

**Effective Date Note:** Section 218.24 was added at 60 FR 11050, Mar. 1, 1995, effective May 15, 1995. At 60 FR 30469, June 9, 1995, § 218.24 was suspended, effective May 15, 1995.

### § 218.25 Workers on a main track.

When workers are on, under, or between rolling equipment on a main track:

- (a) A blue signal must be displayed at each end of the rolling equipment; and
- (b) If the rolling equipment to be protected includes one or more locomotives, a blue signal must be attached to the controlling locomotive at a location where it is readily visible to the engineman or operator at the controls of that locomotive.
- (c) When emergency repair work is to be done on, under, or between a locomotive or one or more cars coupled to a locomotive, and blue signals are not available, the engineman or operator must be notified and effective measures must be taken to protect the workers making the repairs.

[44 FR 2175, Jan. 10, 1979, as amended at 48 FR 6123, Feb. 10, 1983]

### § 218.27 Workers on track other than main track.

When workers are on, under, or between rolling equipment on track other than main track—

- (a) A blue signal must be displayed at or near each manually operated switch providing access to that track;
- (b) Each manually operated switch providing access to the track on which the equipment is located must be lined against movement to that track and locked with an effective locking device; and
- (c) The person in charge of the workers must have notified the operator of any remotely controlled switch that work is to be performed and have been informed by the operator that each remotely controlled switch providing access to the track on which the equipment is located has been lined against movement to that track and locked as prescribed in § 218.30.
- (d) If rolling equipment requiring blue signal protection as provided for in this section is on a track equipped with one or more crossovers, both switches of each crossover must be lined against movement through the crossover toward that rolling equipment, and the switch of each crossover that provides access to the rolling equipment must be protected in accordance with the provisions of paragraphs (a) and (b), or (c) of this section.
- (e) If the rolling equipment to be protected includes one or more locomotives, a blue signal must be attached to the controlling locomotive at a location where it is readily visible to the engineman or operator at the controls of that locomotive.

### § 218.29 Alternate methods of protection.

Instead of providing blue signal protection for workers in accordance with § 218.27, the following methods for blue signal protection may be used:

- (a) When workers are on, under, or between rolling equipment in a locomotive servicing track area:

- (1) A blue signal must be displayed at or near each switch providing entrance to or departure from the area;
  - (2) Each switch providing entrance to or departure from the area must be lined against movement to the area and locked with an effective locking device; and
  - (3) A blue signal must be attached to each controlling locomotive at a location where it is readily visible to the engineman or operator at the controls of that locomotive;
  - (4) If the speed within this area is restricted to not more than 5 miles per hour a derail, capable of restricting access to that portion of a track within the area on which the rolling equipment is located, will fulfill the requirements of a manually operated switch in compliance with paragraph (a)(2) of this section when positioned at least 50 feet from the end of the equipment to be protected by the blue signal, when locked in a derailing position with an effective locking device, and when a blue signal is displayed at the derail;
  - (5) A locomotive may be moved onto a locomotive servicing area track after the blue signal has been removed from the entrance switch to the area. However, the locomotive must be stopped short of coupling to another locomotive;
  - (6) A locomotive may be moved off of a locomotive servicing area track after the blue signal has been removed from the controlling locomotive to be moved and from the area departure switch;
  - (7) If operated by an authorized employee under the direction of the person in charge of the workers, a locomotive protected by blue signals may be repositioned within this area after the blue signal has been removed from the locomotive to be repositioned and the workers on the affected track have been notified of the movement; and
  - (8) Blue signal protection removed for the movement of locomotives as provided in paragraphs (a) (5) and (6) of this section must be restored immediately after the locomotive has cleared the switch.
- (b) When workers are on, under, or between rolling equipment in a car shop repair track area:
- (1) A blue signal must be displayed at or near each switch providing entrance to or departure from the area; and
  - (2) Each switch providing entrance to or departure from the area must be lined against movement to the area and locked with an effective locking device;
  - (3) If the speed within this area is restricted to not more than 5 miles per hour, a derail capable of restricting access to that portion of a track within the area on which the rolling equipment is located will fulfill the requirements of a manually operated switch in compliance with paragraph (a)(2) of this section when positioned at least 50 feet from the end of the equipment to be protected by the blue signal, when locked in a derailing position with an effective locking device and when a blue signal is displayed at the derail;
  - (4) If operated by an authorized employee under the direction of the person in charge of the workmen, a car mover may be used to reposition rolling equipment within this area after workers on the affected track have been notified of the movement.
- (c) Except as provided in paragraphs (a) and (b) of this section, when workers are on, under, or between rolling equipment on any track, other than a main track:

- (1) A derail capable of restricting access to that portion of the track on which such equipment is located, will fulfill the requirements of a manually operated switch when positioned no less than 150 feet from the end so such equipment; and
- (2) Each derail must be locked in a derailing position with an effective locking device and a blue signal must be displayed at each derail.
- (d) When emergency repair work is to be done on, under, or between a locomotive or one or more cars coupled to a locomotive, and blue signals are not available, the engineman or operator at the controls of that locomotive must be notified and effective measures must be taken to protect the workers making the repairs.

[44 FR 2175, Jan. 10, 1979, as amended at 48 FR 6123, Feb. 10, 1983]

### § 218.30 Remotely controlled switches.

- (a) After the operator of the remotely controlled switches has received the notification required by § 218.27(c), he must line each remotely controlled switch against movement to that track and apply an effective locking device to the lever, button, or other device controlling the switch before he may inform the employee in charge of the workers that protection has been provided.
- (b) The operator may not remove the locking device unless he has been informed by the person in charge of the workers that it is safe to do so.
- (c) The operator must maintain for 15 days a written record of each notification which contains the following information:
  - (1) The name and craft of the employee in charge who provided the notification;
  - (2) The number or other designation of the track involved;
  - (3) The date and time the operator notified the employee in charge that protection had been provided in accordance with paragraph (a) of this section; and
  - (4) The date and time the operator was informed that the work had been completed, and the name and craft of the employee in charge who provided this information.

[44 FR 2175, Jan. 10, 1979, as amended at 48 FR 6123, Feb. 10, 1983]

## Subpart C—Protection of Trains and Locomotives

### § 218.31 Scope.

This subpart prescribes minimum operating rule requirements for the protection of railroad employees engaged in the operation of trains, locomotives and other rolling equipment.

[42 FR 5065, Jan. 27, 1977]

### § 218.35 Yard limits.

- (a) After August 1, 1977, yard limits must be designated by—
  - (1) Yard limit signs, and

- (2) Timetable, train orders, or special instructions.
- (b) After August 1, 1977, each railroad must have in effect an operating rule which complies with the requirements set forth below:
  - (1) The main tracks within yard limits may be used, clearing the time an approaching designated class train is due to leave the nearest station where time is shown. In case of failure to clear the time of designated class trains, protection must be provided as § 218.37. In yard limits where main tracks are governed by block signal system rules, protection as prescribed by § 218.37 is not required.
  - (2) Trains and engines, except designated class trains, within yard limits must move prepared to stop within one-half the range of vision but not exceeding 20 m.p.h. unless the main track is known to be clear by block signal indications.
  - (3) Within yard limits, movements against the current of traffic on the main tracks must not be made unless authorized and protected by train order, yardmaster, or other designated official and only under the operating restrictions prescribed in § 218.35(b)(2).
- (c) Each railroad shall designate in the operating rule prescribed under paragraph (b) of this section the class or classes of trains which shall have superiority on the main track within yard limits.

[42 FR 5065, Jan. 27, 1977]

### § 218.37 Flag protection.

- (a) After August 1, 1977, each railroad must have in effect an operating rule which complies with the requirements set forth below:
  - (1) Except as provided in paragraph (a)(2) of this section, flag protection shall be provided—
    - (i) When a train is moving on the main track at less than one-half the maximum authorized speed (including slow order limits) in that territory, flag protection against following trains on the same track must be provided by a crew member by dropping off single lighted fusees at intervals that do not exceed the burning time of the fusee.
    - (ii) When a train is moving on the main track at more than one-half the maximum authorized speed (including slow order limits) in that territory under circumstances in which it may be overtaken, crew members responsible for providing protection will take into consideration the grade, curvature of track, weather conditions, sight distance and relative speed of his train to following trains and will be governed accordingly in the use of fusees.
    - (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.
- (v) Whenever a crew member is providing flag protection, he must not permit other duties to interfere with the protection of his train.

(2) Flag protection against following trains on the same track is not required if—

- (i) The rear of the train is protected by at least two block signals;
- (ii) The rear of the train is protected by an absolute block;
- (iii) The rear of the train is within interlocking limits; or
- (iv) A train order specifies that flag protection is not required.
- (v) A railroad operates only one train at any given time.

- (b) Each railroad shall designate by timetable or other instruction for each territory the specific distance which a crew member providing flag protection must go out in order to provide adequate protection for his train.
- (c) Whenever the use of fusees is prohibited by a Federal, State or local fire regulation, each railroad operating within that jurisdiction shall provide alternate operating procedures to assure full protection of trains in lieu of flag protection required by this section.

*[42 FR 5065, Jan. 27, 1977, as amended at 42 FR 38362, July 28, 1977; 73 FR 8498, Feb. 13, 2008]*

## § 218.39 Hump operations.

After June 30, 1984, each railroad that operates a remote control hump yard facility must have in effect an operating rule that adopts the following provisions in substance:

- (a) When a train or engine service employee is required to couple an air hose or to adjust a coupling device and that activity will require that the employee place himself between pieces of rolling equipment located on a bowl track, the operator of any remotely controlled switch that provides access from the apex of the hump to the track on which the rolling equipment is located shall be notified;
- (b) Upon such notification, the operator of such remotely controlled switch shall line it against movement to the affected bowl track and shall apply a locking or blocking device to the control for that switch; and
- (c) The operator shall then notify the employee that the requested protection has been provided and shall remove the locking or blocking device only after being notified by the employee that protection is no longer required on that track.

(Sec. 202, 84 Stat. 971 (45 U.S.C. 431); sec. 1.49(m) of the regulations of the Secretary of Transportation (49 CFR 1.49(m)))

[49 FR 6497, Feb. 22, 1984]

### § 218.41 Noncompliance with hump operations rule.

A person (including a railroad and any manager, supervisor, official, or other employee or agent of a railroad) who fails to comply with a railroad's operating rule issued pursuant to § 218.39 is subject to a penalty. See FRA's website at [www.fra.dot.gov](http://www.fra.dot.gov) for a statement of agency civil penalty policy.

[84 FR 23734, May 23, 2019]

## Subpart D—Prohibition Against Tampering With Safety Devices

**Source:** 54 FR 5492, Feb. 3, 1989, unless otherwise noted.

### § 218.51 Purpose.

- (a) The purpose of this subpart is to prevent accidents and casualties that can result from the operation of trains when safety devices intended to improve the safety of their movement have been disabled.
- (b) This subpart does not prohibit intervention with safety devices that is permitted:
  - (1) Under the provisions of § 236.566 or § 236.567 of this chapter;
  - (2) Under the provisions of § 218.61 of this part; or
  - (3) Under the provisions of § 229.9 of this chapter, provided that when a locomotive is being operated under the provision of § 229.9(b) a designated officer has been notified of the defective alerter or deadman pedal at the first available point of communication.

[54 FR 5492, Feb. 3, 1989, as amended at 58 FR 36613, July 8, 1993]

### § 218.53 Scope and definitions.

- (a) This subpart establishes standards of conduct for railroads and individuals who operate or permit to be operated locomotives equipped with one or more of the safety devices identified in paragraph (c) of this section.
- (b) **Disable** means to unlawfully render a device incapable of proper and effective action or to materially impair the functioning of that device.
- (c) **Safety Device** means any locomotive-mounted equipment used either to assure the locomotive engineer is alert, not physically incapacitated, and aware of and complying with the indications of a signal system or other operational control system, or a system used to record data concerning the operations of that locomotive or the train it is powering. See appendix C to this part for a statement of agency policy on this subject.
- (d) The provisions in §§ 218.59 and 218.61 do not apply to locomotive-mounted image or audio recording equipment on freight locomotives.

[54 FR 5492, Feb. 3, 1989, as amended at 88 FR 70760, Oct. 12, 2023]

### § 218.55 Tampering prohibited.

Any individual who willfully disables a safety device is subject to a civil penalty and to disqualification from performing safety-sensitive functions on a railroad if found unfit for such duties under the procedures provided for in 49 CFR part 209. See FRA's website at [www.fra.dot.gov](http://www.fra.dot.gov) for a statement of agency civil penalty policy.

[84 FR 23734, May 23, 2019]

### § 218.57 Responsibilities of individuals.

Any individual who knowingly operates a train, or permits it to be operated, when the controlling locomotive of that train is equipped with a disabled safety device, is subject to a civil penalty and to disqualification from performing safety-sensitive functions on a railroad if found to be unfit for such duties. See appendix B to this part for a statement of agency enforcement policy concerning violations of this section. See FRA's website at [www.fra.dot.gov](http://www.fra.dot.gov) for a statement of agency civil penalty policy.

[84 FR 23734, May 23, 2019]

### § 218.59 Responsibilities of railroads.

Any railroad that operates a train when the controlling locomotive of a train is equipped with a disabled safety device is subject to a civil penalty. See FRA's website at [www.fra.dot.gov](http://www.fra.dot.gov) for a statement of agency civil penalty policy.

[84 FR 23734, May 23, 2019]

### § 218.61 Authority to deactivate safety devices.

- (a) For the purpose of this chapter, it is lawful to temporarily render a safety device incapable of proper or effective action or to materially impair its function if this action is taken as provided for in paragraph (b) or (c) of this section.
- (b) If a locomotive is equipped with a device to assure that the operator is alert or not physically incapacitated, that device may be deactivated when:
  - (1) The locomotive is not the controlling locomotive;
  - (2) The locomotive is performing switching operations and not hauling cars in a manner that constitutes a train movement under part 232 of this chapter;
  - (3) The locomotive is dead-in-tow; or
  - (4) The locomotive is a mid-train slave unit being controlled by radio from a remote location.
- (c) If a locomotive in commuter or intercity passenger service is equipped with a device to record data concerning the operation of that locomotive or the train it is powering, that device may be deactivated only under the provisions of § 229.135 of this chapter. Inward- and outward-facing image recording devices on commuter or intercity passenger locomotives may be deactivated only under the provisions of § 229.136 of this chapter. This section does not apply to inward- or outward-facing image recording devices that are installed on freight locomotives.

[54 FR 5492, Feb. 3, 1989, as amended at 58 FR 36613, July 8, 1993; 88 FR 70760, Oct. 12, 2023]



## Subpart E—Protection of Occupied Camp Cars

**Source:** 54 FR 39545, Sept. 27, 1989, unless otherwise noted.

### § 218.71 Purpose and scope.

This subpart prescribes minimum requirements governing protection of camp cars that house railroad employees. The rule does not apply to such cars while they are in a train.

### § 218.73 Warning signal display.

- (a) Warning signals, *i.e.*, a white disk with the words “Occupied Camp Car” in black lettering during daylight hours and an illuminated white signal at night, displayed in accordance with § 218.75, § 218.77, or § 218.79 signify that employees are in, around, or in the vicinity of camp cars. Once the signals have been displayed—
  - (1) The camp cars may not be moved for coupling to other rolling equipment or moved to another location;
  - (2) Rolling equipment may not be placed on the same track so as to reduce or block the view of a warning signal; and
  - (3) Rolling equipment may not pass a warning signal.
- (b) Warning signals indicating the presence of occupied camp cars, displayed in accordance with §§ 218.75 and 218.79, shall be displayed by a designated occupant of the camp cars or that person's immediate supervisor. The signal(s) shall be displayed as soon as such cars are placed on the track, and such signals may only be removed by those same individuals prior to the time the cars are moved to another location.

### § 218.75 Methods of protection for camp cars.

When camp cars requiring protection are on either main track or track other than main track:

- (a) A warning signal shall be displayed at or near each switch providing access to that track;
- (b) The person in charge of the camp car occupants shall immediately notify the person responsible for directing train movements on that portion of the railroad where the camp cars are being parked;
- (c) Once notified of the presence of camp cars and their location on main track or other than main track, the person responsible for directing train movements on that portion of the railroad where the camp cars are being parked shall take appropriate action to alert affected personnel to the presence of the cars;
- (d) Each manually operating switch providing access to track on which the camp cars are located shall be lined against movement to that track and secured with an effective locking device and spiked; and
- (e) Each remotely controlled switch providing access to the track on which the camp cars are located shall be protected in accordance with § 218.77.

### § 218.77 Remotely controlled switches.

- (a) After the operator of the remotely controlled switch is notified that a camp car is to be placed on a particular track, he shall line such switch against movement to that track and apply an effective locking device applied to the lever, button, or other device controlling the switch before informing the person in charge of the camp car occupants that protection has been provided.
- (b) The operator may not remove the locking device until informed by the person in charge of the camp car occupants that protection is no longer required.
- (c) The operator shall maintain for 15 days a written record of each notification that contains the following information:
  - (1) The name and craft of the employee in charge who provided the notification;
  - (2) The number or other designation of the track involved;
  - (3) The date and time the operator notified the employee in charge that protection had been provided in accordance with paragraph (a) of this section; and
  - (4) The date and time the operator was informed that the work had been completed, and the name and craft of the employee in charge who provided this information.
- (d) When occupied camp cars are parked on main track, a derail, capable of restricting access to that portion of the track on which such equipment is located, shall be positioned no less than 150 feet from the end of such equipment and locked in a derailing position with an effective locking device, and a warning signal must be displayed at the derail.

### § 218.79 Alternative methods of protection.

Instead of providing protection for occupied camp cars in accordance with § 218.75 or § 218.77, the following methods of protection may be used:

- (a) When occupied camp cars are on track other than main track:
  - (1) A warning signal must be displayed at or near each switch providing access to or from the track;
  - (2) Each switch providing entrance to or departure from the area must be lined against movement to the track and locked with an effective locking device; and
  - (3) If the speed within this area is restricted to not more than five miles per hour, a derail, capable of restricting access to that portion of track on which the camp cars are located, will fulfill the requirements of a manually operated switch in compliance with paragraph (a)(2) of this section when positioned at least 50 feet from the end of the camp cars to be protected by the warning signal, when locked in a derailing position with an effective locking device, and when a warning signal is displayed at the derail.
- (b) Except as provided in paragraph (a) of this section, when occupied camp cars are on track other than main track:
  - (1) A derail, capable of restricting access to that portion of the track on which such equipment is located, will fulfill the requirements of a manually operated switch when positioned no less than 150 feet from the end of such equipment; and

- (2) Each derail must be locked in a derailing position with an effective locking device and a warning signal must be displayed at each derail.

### § 218.80 Movement of occupied camp cars.

Occupied cars may not be humped or flat switched unless coupled to a locomotive.

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

**Source:** 73 FR 8498, Feb. 13, 2008, unless otherwise noted.

### § 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—

**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.

**Departure track** means a track located in a classification yard where rolling equipment is placed and made ready for an outgoing train movement.

**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.

**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.

[73 FR 8498, Feb. 13, 2008, as amended at 73 FR 33902, June 16, 2008; 89 FR 25108, Apr. 9, 2024]

## § 218.95 Instruction, training, and examination.

- (a) **Program.** Beginning January 1, 2009, 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 July 1, 2009.
- (4) Beginning July 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.

[73 FR 8498, Feb. 13, 2008, as amended at 73 FR 33902, June 16, 2008]

## § 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 service 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 train with two or more locomotives that is operated from a single control stand 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 a helper service train operation 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.
- (5) Shoving or pushing movements made in the direction of the circuited end of a designated departure track equipped with a shove light system, if all of the following conditions are met:
  - (i) The shove light system is demonstrated to be failsafe;
  - (ii) The shove light system is arranged to display a less favorable aspect when the circuited section of the track is occupied;
  - (iii) Written procedures are adopted and complied with that provide for a reliable means of determining track occupancy prior to commencing a shoving or pushing movement;
  - (iv) The track is designated in writing;
  - (v) The track is under the exclusive and continuous control of a yardmaster or other qualified employee;
  - (vi) The train crewmember or other qualified employee directing the shoving or pushing movement complies with the general movement requirements contained in paragraphs (b)(1) and (b)(2) of this section;
  - (vii) All remote control shoving or pushing movements comply with the requirements contained in paragraph (c)(1) of this section; and
  - (viii) The shove light system is continuously illuminated when the circuited section of the track is unoccupied.

[73 FR 8498, Feb. 13, 2008, as amended at 73 FR 33902, June 16, 2008; 89 FR 25108, Apr. 9, 2024]

## **§ 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-signaled 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.

## Subpart G—Train Crew Size Safety Requirements

**Source:** 89 FR 25109, Apr. 9, 2024, unless otherwise noted.

### § 218.121 Purpose and scope.

- (a) The purpose of this subpart is to ensure that each train is adequately staffed and has appropriate safeguards in place for safe train operations under all operating conditions.
- (b) This subpart prescribes minimum requirements for the size of different train crews depending on the type of operation and operating conditions. The minimum crew size requirements reflect the safety risks posed to railroad employees, the public, and the environment. This subpart also prescribes minimum requirements for the location of a second crewmember on a moving train and promotes safe and effective teamwork. Each railroad may prescribe additional or more stringent requirements in its operating rules, timetables, timetable special instructions, and other instructions.
- (c) The requirements in this subpart are not applicable to a train operation controlled by a remote control operator as defined in § 229.5 of this chapter.

### § 218.123 General train crew size safety requirements.

- (a) **General.** Each railroad shall comply with the requirements of this subpart and may adopt its own rules or practices consistent with the requirements of this subpart. If any person, as defined in § 218.9 (including, but not limited to, each railroad, railroad officer, supervisor, and employee), violates any requirement of a railroad rule or practice implementing the requirements of this subpart, that person shall be considered to have violated the requirements of this subpart.
- (b) **Two-person train crew size safety requirement.** Except as provided in this subpart, each train shall be assigned a minimum of two crewmembers.
- (c) **Hazardous materials.** For the purposes of this paragraph (c), a tank car containing residue of a hazardous material as defined in § 171.8 of this title is not considered a loaded car. The exceptions in §§ 218.125 and 218.127 are not applicable, and the exceptions in § 218.129 apply as specified therein, when any train is:
  - (1) A high-hazard flammable train (HHFT) as defined in § 171.8 of this title;
  - (2) Transporting twenty (20) or more loaded tank cars or loaded intermodal portable tanks of any one or any combination of the hazardous materials identified in § 232.103(n)(6)(i)(B) of this chapter; or
  - (3) Transporting one or more car loads of rail-security sensitive materials (RSSM) as defined in § 1580.3 of this title.
- (d) **Location of crewmember(s) when the train is moving.** A train crewmember that is not operating the train may be located anywhere outside of the operating cab of the controlling locomotive when the train is moving if:
  - (1) The train crewmember is on the train, except when the train crewmember cannot perform the duties assigned without temporarily disembarking from the train;

- (2) The train crewmember and a locomotive engineer in the cab of the controlling locomotive can directly communicate with each other;
- (3) The train crewmember can continue to perform the duties assigned; and
- (4) The location does not violate any Federal railroad safety law, regulation, or order.

### **§ 218.125 Specific passenger and tourist train operation exceptions to crew size safety requirements.**

The requirements in this subpart are not applicable to the following passenger and tourist train operations that are operated with a one-person train crew:

- (a) The train is a tourist train operation that is not part of the general railroad system of transportation;
- (b) A tourist train operation that is part of the general system of transportation or a passenger operation in which:
  - (1) The locomotive engineer is moving cars empty of passengers; and
  - (2) Passengers will not board the train's cars until the crew conducts a safety briefing on the safe operation and use of the train's exterior side doors, in accordance with § 238.135 of this chapter;
- (c) A tourist train operation that is part of the general system of transportation or a passenger operation involving a single self-propelled car or married-pair unit, e.g., an MU locomotive operation, where the locomotive engineer has direct access to the passenger seating compartment and (for passenger railroads subject to part 239 of this chapter) the passenger railroad's emergency preparedness plan for this operation is approved under § 239.201 of this chapter;
- (d) A rapid transit operation in an urban area, i.e., an urban rapid transit system that is connected with the general railroad system of transportation under the following conditions:
  - (1) The operation is temporally separated from any conventional railroad operations;
  - (2) There is an FTA-approved and designated State Safety Oversight (SSO) Agency that is qualified to provide safety oversight; and
  - (3) The operator has an FTA/SSO-approved Public Transportation Agency Safety Plan in accordance with parts 673 and 674 of this title; or
- (e) Each passenger train operation with a one-person train crew established before June 10, 2024 with an approved passenger train emergency preparedness plan under part 239 of this chapter for the operation.

### **§ 218.127 Specific freight train exceptions to crew size safety requirements.**

The requirements in this subpart are not applicable to the following freight train operations that are operated with a one-person train crew:

- (a) ***Mine load out, plant dumping, or similar operation exception.*** A unit freight train:
  - (1) Being loaded or unloaded in an assembly line manner;
  - (2) Located on a track that is temporarily made inaccessible from the general railroad system of transportation;
  - (3) Moving at a maximum authorized speed of 10 miles per hour or less;



- (4) Not requiring the one-person train crewmember to operate a hand-operated switch, fill out paperwork, or call signal indications during the loading or unloading process; and
- (5) If the operation is overseen by another person, typically in a tower or on the ground, requiring that person to have the capability of communicating with the one-person train crewmember operating the train.

(b) [Reserved]

**§ 218.129 Conditional exceptions based on compliance dates for Class II and III legacy freight train operations, certain other Class II and III freight railroad train operations, work train operations, helper service train operations, and lite locomotive train operations staffed with a one-person train crew.**

- (a) *Application of this section.* A railroad is not required to comply with the requirements in this section for each one-person train crew operation subject to an exception covered by § 218.125 or § 218.127. The following train operations may be operated with a one-person train crew subject to the requirements in this subpart:
  - (1) Each Class II or III railroad's legacy one-person train crew freight operation that has been established for at least two years before June 10, 2024, may continue to operate with a one-person train crew, including continuing to transport hazardous materials of the types or quantities specified in § 218.123(c), if:
    - (i) No later than September 6, 2024, the railroad:
      - (A) Provides FRA with written notice, as specified by the requirements in paragraph (b) of this section; and
      - (B) Complies with the additional requirements in paragraphs (c)(1) and (2) of this section; and
    - (ii) No later than June 9, 2026, the railroad complies with the additional requirements in paragraph (c)(3) of this section.
  - (2) Each Class II or III freight railroad seeking to initiate a train operation staffed with a one-person train crew not transporting hazardous materials of the types or quantities specified in § 218.123(c) shall:
    - (i) Provide FRA with written notice, as specified by the requirements in paragraph (b) of this section before commencing the operation; and
    - (ii) Comply with the additional requirements in paragraph (c) of this section.
  - (3) Each railroad seeking to continue or initiate work train operations with a one-person train crew, including operations involving a work train traveling to or from a work site, shall:
    - (i) Limit this type of non-revenue service train that is used for the administration and upkeep service of the railroad so that it does not exceed 4,000 trailing tons;
    - (ii) No later than September 6, 2024, comply with the additional requirements in paragraphs (c)(1) and (2) of this section; and
    - (iii) No later than June 9, 2026, comply with the additional requirements in paragraph (c)(3) of this section.

- (4) Each railroad seeking to continue or initiate helper service train operations with a one-person train crew, including operations involving a helper service train traveling to or from a work site, shall:
  - (i) No later than September 6, 2024, comply with the additional requirements in paragraphs (c)(1) and (2) of this section; and
  - (ii) No later than June 9, 2026, comply with the additional requirements in paragraph (c)(3) of this section.
- (5) Each railroad seeking to continue or initiate a lite locomotive train operation staffed with a one-person train crew, excluding an MU locomotive operation, shall:
  - (i) No later than September 6, 2024, comply with the additional requirements in paragraphs (c)(1) and (2) of this section; and
  - (ii) No later than June 9, 2026, comply with the additional requirements in paragraph (c)(3) of this section.
- (b) **Written notice requirements.** The written notice shall be submitted by email to [FRAOPCERTPROG@dot.gov](mailto:FRAOPCERTPROG@dot.gov) and, at a minimum, include the following:
  - (1) The name, title, address, telephone number, and email address of the primary person(s) to be contacted regarding the written notice and the operation;
  - (2) The location of the operation, with as much specificity as can be provided, as to the characteristics of the geographic area through which the trains will operate (e.g., population density and proximity to environmentally sensitive areas), the terrain over which the trains will be operated, industries or communities served, and track segments, territories, divisions, or subdivisions operated over. For each legacy one-person train crew freight operation under paragraph (a)(1) of this section, the written notice must include business records or other written documents supporting that the legacy operation was established for at least two years before June 10, 2024. To establish a legacy one-person train crew freight operation, the railroad must provide evidence that the operation occurred at regular intervals under a set of defined procedures or conditions;
  - (3) The class(es) of track operated over, the method of operation, a list of the signal and train control systems, devices, and appliances installed and in operation, and a list of all active and passive highway-rail grade crossings, including crossing numbers;
  - (4) The locations of any track where the average grade of any segment of the track operated over is 1 percent or more over 3 continuous miles or 2 percent or more over 2 continuous miles;
  - (5) The maximum authorized speed of the operation;
  - (6) The approximate average number of miles and hours a one-person train crew will operate in a single tour of duty;
  - (7) The number and frequency of the trains involved, and the maximum number of cars and tonnage set for the operation, if any;
  - (8) Whether the one-person train crew operation is permitted to haul hazardous materials of any quantity and type, and the approximate percentage of carload traffic in the one-person train crew operation that is hazardous materials;

- (9) Whether any limitations are placed on a person operating as a one-person train crew. Such limitations may include, but are not limited to, a maximum number of miles or hours during a single tour of duty, or limitations placed on a person in coordination with a fatigue mitigation plan;
  - (10) Information regarding other operations traveling on the same track as the one-person train operation or that travel on an adjacent track. Such information shall include, but is not limited to, the volume of traffic and the types of opposing moves (e.g., passenger trains or freight trains hauling hazardous materials);
  - (11) A detailed description of any technology that is used to perform tasks typically performed by a second crewmember, or that prevents or mitigates the consequences of accidents or incidents;
  - (12) A copy of any railroad rule or practice that applies to the one-person train crew operation, but does not apply to train crew operations with two or more crewmembers;
  - (13) For each railroad seeking to continue a legacy freight train operation staffed with a one-person train crew as permitted by paragraph (a)(1) of this section, five (5) years of accident and incident data, as required by part 225 of this chapter, for the operation identified or, for operations established less than five (5) years before June 10, 2024, accident and incident data for the operation from the date the operation was established; and
  - (14) Any other information describing protections provided in lieu of a second train crewmember, or relevant data or analysis, or both, that the railroad can provide about its one-person train crew operation and how that operation is as safe or safer than a two-person minimum train crew operation.
- (c) **Additional requirements.** Each railroad with an applicable one-person train crew operation shall:
- (1) Adopt and comply with an operating rule that satisfies the requirements of this paragraph to ensure rail employees can take mitigation measures that provide a level of safety that is as safe or safer than a two-person train crew operation to address certain situations with the one-person train crew operation.
    - (i) At a minimum, the operating rule shall address the following types of situations:
      - (A) An accidental or non-accidental release of any hazardous material;
      - (B) An accident/incident regardless of whether it is required to be reported to FRA under part 225 of this chapter;
      - (C) A request from an emergency responder to unblock a highway-rail grade crossing in response to a potentially life-threatening situation;
      - (D) A train or on-track equipment derailment;
      - (E) A disabled train; and
      - (F) An illness, injury, or other incapacitation of the one-person train crewmember.
    - (ii) At a minimum, the operating rule shall:
      - (A) Describe the role and responsibilities of the one-person train crewmember and any other railroad employees, including supervisors, with responsibility to address a situation described in paragraph (c)(1)(i) of this section; and
      - (B) Describe any logistics and the railroad's expected response time(s).

- (2) Adopt and comply with an operating rule that satisfies the requirements of this paragraph to ensure radio or wireless communications with a one-person train crew is as safe or safer than a two-person train crew for train operations and crewmember safety. At a minimum, the operating rule shall require that:
  - (i) The one-person train crew have a working radio or working wireless communications on the controlling locomotive appropriate for railroad communications as defined in § 220.5 of this chapter, even if not otherwise required in § 220.9 of this chapter;
  - (ii) The train dispatcher or operator must confirm with a one-person train crewmember that the train is stopped before conveying a mandatory directive by radio transmission as required in § 220.61 of this chapter;
  - (iii) A one-person train crewmember must contact a railroad employee, typically a dispatcher, a supervisor or manager, or an intermittently assisting crewmember, whenever it can be anticipated that radio or wireless communication could be lost, e.g., before the train enters a tunnel, unless technology or a different protocol is established to monitor the train's real-time progress; and
  - (iv) Procedures that establish when search-and-rescue operations shall be initiated if all radio or wireless communication is lost with a one-person train crewmember.
- (3) Adopt and comply with an operating rule that satisfies the requirements of this paragraph to ensure:
  - (i) A one-person train crew's controlling locomotive is equipped with a functioning alerter that is operating as intended as defined in § 229.5 of this chapter. For each railroad that limits the one-person train crew's operation to a maximum authorized speed of 25 miles per hour and is not required to have an alerter on the locomotive that is equipped per the requirements in § 229.140 of this chapter, any functioning alerter that is operating as intended will be acceptable if it has a manual reset and will result in a penalty brake application that brings the locomotive or train to a stop if not properly acknowledged; and
  - (ii) That a one-person train crewmember must test that alerter to confirm it is functioning before departure from each initial terminal, or prior to being coupled as the lead locomotive in a locomotive consist.

**§ 218.131 Special approval petition requirements for train operations staffed with a one-person train crew.**

- (a) **General.** With the exception of operations permitted under §§ 218.125 through 218.129, and as provided in paragraph (a)(2) of this section:
  - (1) No railroad may operate a train with a one-person train crew unless it receives special approval for the operation under this subpart.
  - (2) For a railroad that has established a one-person train crew operation before June 10, 2024, the railroad may continue the operation in accordance with this section pending FRA's decision on the railroad's special approval petition if:
    - (i) The railroad submits a written notice by email to [FRAOPCERTPROG@dot.gov](mailto:FRAOPCERTPROG@dot.gov) no later than June 24, 2024 that, at a minimum, provides a summary of the operation and the name, title, address, telephone number, and email address of the primary person(s) to be contacted regarding the written notice and the operation;

- (ii) The railroad, in coordination with FRA, eliminates, mitigates, or otherwise addresses any safety hazards related to the one-person train crew operation FRA finds in reviewing the railroad's special approval petition; and
  - (iii) The railroad submits its special approval petition, as specified by the requirements in paragraph (b) of this section, no later than August 7, 2024.
- (3) Each freight railroad seeking to either initiate or continue a train operation with a one-person train crew must receive FRA's special approval for the operation under this subpart and shall comply with the requirements in § 218.129(c).
- (4) Each passenger railroad seeking to initiate a train operation with a one-person train crew must receive FRA's special approval for the operation under this subpart and have either:
  - (i) An approved passenger train emergency preparedness plan under part 239 of this chapter for the operation; or
  - (ii) An approved waiver from the passenger train emergency preparedness plan requirements as permitted under part 211 of this chapter. A passenger railroad may petition FRA for both a waiver under part 211 and special approval for a train operation staffed with a one-person train crew in the same filing.
- (b) ***Petition for a train operation staffed with a one-person train crew.*** Each petition for a train operation with a one-person train crew that is not permitted under §§ 218.125 through 218.129 must contain sufficient information for FRA to determine whether approving the operation described in the petition is as safe or safer than a two-person minimum train crew operation. At a minimum, a petition must include:
  - (1) The name, title, address, telephone number, and email address of the primary person to be contacted regarding review of the special approval petition;
  - (2) The location of the operation, with as much specificity as can be provided, as to the characteristics of the geographic area through which the trains will operate (e.g. population density and proximity to environmentally sensitive areas), the terrain over which the trains will be operated, industries or communities served, and track segments, territories, divisions, or subdivisions operated over;
  - (3) The class(es) of track to be operated over, the method of operation, a list of the signal and train control systems, devices, and appliances installed and in operation, and a list of all active and passive highway-rail grade crossings, including crossing numbers;
  - (4) The locations of any track where the average grade of any segment of the track operated over is 1 percent or more over 3 continuous miles or 2 percent or more over 2 continuous miles;
  - (5) The maximum authorized speed of the operation;
  - (6) The approximate average number of miles and hours a person is projected to operate as a train crewmember in a one-person train crew operation;
  - (7) The maximum number of cars and tonnage proposed for the operation, if any;
  - (8) Whether the railroad is seeking approval to transport hazardous materials of the types or quantities specified in § 218.123(c) or whether the railroad is seeking approval to transport other hazardous materials (as defined by § 171.8 of this title) of any quantity and type;

- (9) Whether any limitations will be placed on a person operating as a one-person train crew. Such limitations may include, but are not limited to, a maximum number of miles or hours during a single tour of duty, or limitations placed on a person in coordination with a fatigue mitigation plan;
  - (10) Information regarding other operations that may travel on the same track as, or an adjacent track to, the train operation staffed with a one-person train crew. Such information shall include, but is not limited to, the volume of traffic and the types of opposing moves (e.g., passenger or freight trains hauling hazardous materials);
  - (11) A detailed description of any technology that will be used to perform or support tasks typically performed by a second crewmember, or that will prevent or significantly mitigate the consequences of accidents or incidents;
  - (12) A copy of any railroad rule or practice that will apply to the proposed train operation(s) with a one-person train crew, but does not apply to train crew operations with two or more crewmembers;
  - (13) A copy of a railroad operating rule that will apply to the proposed train operation(s) with a one-person train crew, and which complies with the requirements of § 218.129(c)(1), to ensure rail employees can take mitigation measures that provide a level of safety that is as safe or safer than a two-person train crew operation to address certain situations with the one-person train crew operation. A passenger train operation with an approved emergency preparedness plan under part 239 of this chapter satisfies the requirement in this paragraph (b)(13);
  - (14) Five (5) years of accident and incident data, as required by part 225 of this chapter, for the operation identified in paragraph (b)(2) of this section, when operating with two or more crewmembers, or, for operations established less than five (5) years before June 10, 2024, accident and incident data for the operation from the date the operation was established;
  - (15) A risk assessment of the proposed operation that meets the requirements of § 218.133;
  - (16) Any other information describing protections provided in lieu of a second train crewmember, or other relevant data or analysis.
- (c) **Additional information.** FRA may request any additional information, beyond what is provided in the petition, that it deems necessary.

### § 218.133 Risk assessment content and procedures.

- (a) **General.** A risk assessment submitted under this subpart must meet the following requirements:
  - (1) Contain a list and descriptions of all functions, duties, and tasks associated with the proposed operation to be performed by the one-person train crewmember, other railroad employee(s), or equipment, including, at a minimum, any function performed:
    - (i) To prepare a train for operation (including, but not limited to, pre-departure inspections, obtaining track bulletins, orders, or manifests, managing the train consist, including train makeup, obtaining and ensuring the accuracy of the train consist, arming and testing the end-of-train device, and performing brake tests);
    - (ii) To operate a train (including, but not limited to, operating and controlling the train, interacting with non-crewmembers such as the dispatcher or roadway workers, and responding to emergencies or unexpected events); and

- (iii) To ensure safety once a train has stopped moving (e.g., including, but not limited to, securing the train).
- (2) Describe the allocation of all functions, duties, and tasks to the one-person train crewmember, other railroad employee(s), or equipment.
- (3) Contain a risk-based hazard analysis for the proposed train operation's functions, duties, and tasks, that shall:
  - (i) Identify any new hazards, changes to existing hazards and/or changes to the risk of an existing hazard associated with the proposed train operation, as compared to a two-person minimum train crew operation, taking account of all aspects of the railroad's system, including, at a minimum, infrastructure, equipment, technology, work schedules, mode of operation, operating rules and practices, training and other areas impacting railroad safety;
  - (ii) Calculate and/or update each risk, quantitatively or qualitatively, or both, by assessing each new hazard, change to an existing hazard and/or change to the risk of a hazard, in terms of the severity and likelihood of a mishap;
  - (iii) Recalculate each risk mitigated in accordance with § 218.131(b)(15), quantitatively or qualitatively, or both, by assessing each new hazard, change to an existing hazard and/or change to the risk of a hazard and the level of mitigation (elimination or reduction), in terms of the severity and likelihood of a mishap; and
  - (iv) Provide a statement with supporting evidence that the one-person train crew operation with a fully implemented mitigation plan is as safe or safer than a two-person minimum train crew operation.
- (4) Contain a mitigation plan that documents the design and implementation timeline of the sustained mitigation strategies to eliminate or reduce the overall risk to a level such that the one-person train crew operation is as safe or safer than a two-person minimum train crew operation, considering, at a minimum, the following:
  - (i) The design of the system, equipment, and components, including equipment reliability and the necessary functions to be performed, in both a normal operation and in a degraded or failed state; and
  - (ii) The human factors associated with the processes and tasks to be performed, including the required skills and capabilities, the operating environment, and existing or potential impairments.
- (b) **Alternative standard.** A railroad may petition the Associate Administrator for Safety for approval to use alternative methodologies or procedures, or both, other than those required by paragraph (a) of this section to assess the risk associated with an operation proposed under this section. If, after providing public notice of the request for approval and an opportunity for public comment on the request, the Associate Administrator for Safety finds that any such petition demonstrates that the alternative proposed methodology or procedures, or both, will provide an accurate assessment of the risk associated with the operation, the Associate Administrator for Safety may approve the use of the proposed alternative(s).

## § 218.135 Special approval procedure.

- (a) **Petition.** Each railroad submitting a petition under § 218.131 shall send the petition by email to [FRAOPCERTPROG@dot.gov](mailto:FRAOPCERTPROG@dot.gov). FRA will make the petition publicly available at <https://www.regulations.gov>.
- (b) **Federal Register notice.** FRA will publish a notice in the FEDERAL REGISTER concerning each petition under § 218.131.
- (c) **Comment.** Not later than 60 days from the date of publication of the notice in the FEDERAL REGISTER under paragraph (b) of this section, any person may comment on the petition.
  - (1) Each comment shall provide all relevant information and data in support of the commenter's position.
  - (2) Each comment shall be submitted to FRA through <https://www.regulations.gov> to the docket identified in the FEDERAL REGISTER notice.
- (d) **Disposition of petitions.**
  - (1) If the Administrator finds it necessary or desirable, FRA will conduct a hearing on a petition in accordance with its rules of practice in part 211 of this chapter.
  - (2) A petition must not be implemented until approved. If FRA finds that the petition complies with the requirements of § 218.131 and that approving the petition is as safe or safer than a two-person minimum train crew operation, FRA will grant the petition, normally within 120 days of its receipt. If the petition is neither granted nor denied within 120 days, the petition remains pending for decision. FRA may attach special conditions to the approval of the petition. Following the approval of a petition, FRA may reopen consideration of the petition for cause stated.
  - (3) If FRA finds that a petition does not comply with the requirements of this subpart or that approving the petition would not be as safe or safer than a two-person minimum train crew operation, FRA will deny the petition, normally within 120 days of its receipt.
  - (4) When FRA decides a petition, reopens consideration of a petition, or closes a reopened petition, FRA will send written notice of the decision to the petitioner and publish that decision in the docket.
- (e) **Modifications.**
  - (1) A railroad that intends to materially modify an operation subject to an FRA approval under this section shall submit a description of how it intends to modify the operation, along with either a new or an updated risk assessment accounting for the identified proposed modifications. The new or updated risk assessment must meet the requirements of § 218.133 and be submitted by email to [FRAOPCERTPROG@dot.gov](mailto:FRAOPCERTPROG@dot.gov) at least 60 days before the date proposed to implement any such modification. For the purposes of this paragraph (e), a material modification is a change:
    - (i) To a railroad's operations, infrastructure, locomotive control technology, or risk mitigation technology, that may affect the safety of the operation;
    - (ii) That would affect the assumptions underlying the risk assessment on which an FRA approval under this section is based; or
    - (iii) That would affect the assumptions underlying the risk assessment's risk calculations or mitigations on which an FRA approval under this section is based.



- (2) When FRA decides on a material modification to a petition, FRA will send written notice of the decision to the petitioner and publish that decision in the same docket created for the petition in paragraph (a) of this section. FRA may reopen consideration of a petition based on a material modification, deny the material modification, or grant the material modification with or without special conditions to the approval. A material modification must not be implemented until approved. If the material modification submission is neither granted nor denied within 60 days, the petition remains pending for decision.

**§ 218.137 Annual railroad responsibilities after receipt of special approval.**

- (a) Each railroad that receives special approval to use an operation with a one-person train crew under this subpart shall prepare an annual report, which will be a formal review and analysis each calendar year, of the one-person train crew operation. The annual report, which will include a railroad's findings and conclusions from its review, shall be submitted no later than March 31 of the following year to [FRAOPCERTPROG@dot.gov](mailto:FRAOPCERTPROG@dot.gov). The requirements in paragraphs (b) and (c) of this section describe the components of a railroad's annual report.
- (b) A railroad's annual report must include the safety data and information listed in paragraphs (b)(1) and (2) of this section for any one-person train crew operation that receives special approval under this subpart.
  - (1) The total number of:
    - (i) FRA-reportable accidents/incidents under part 225 of this chapter, including subtotals for accidents/incidents that occurred at a highway-rail grade crossing and those that did not occur at a highway-rail grade crossing, and subtotals by State and cause. If an accident/incident was FRA-reportable for more than one reason (e.g., the accident/incident occurred at a highway-rail grade crossing and resulted in rail equipment damages higher than the current reporting threshold), the accident/incident shall only be listed once in the total calculation;
    - (ii) FRA-reportable employee fatalities;
    - (iii) FRA-reportable employee injuries;
    - (iv) Trespasser fatalities at a highway-rail grade crossing;
    - (v) Trespasser injuries at a highway-rail grade crossing;
    - (vi) Passenger fatalities at a highway-rail grade crossing;
    - (vii) Passenger injuries at a highway-rail grade crossing;
    - (viii) Instances where a railroad employee did not comply with a railroad rule or practice applicable to the one-person train crew operation receiving special approval under this subpart but not applicable to train crew operations with two or more crewmembers that travel on the train;
    - (ix) Instances where a one-person train crewmember had a locomotive engineer or conductor certification revoked for violation of an operating rule or practice that occurred when the person was operating a one-person train crew operation receiving special approval under this subpart. In addition to the total number of these instances, the railroad must report the subtotals for each type of certification revoked;
    - (x) Accountable rail equipment accidents/incidents under part 225 of this chapter;

- (xi) Instances when the railroad was required to comply with an operating rule to ensure rail employees can take mitigation measures that provide a level of safety that is as safe or safer than a two-person train crew operation to address certain situations with the one-person train crew operation under § 218.131(b)(13);
  - (xii) Instances when a dispatcher, operator, or other required employee unexpectedly lost communication with the one-person train crew operation receiving special approval under this subpart;
  - (xiii) Employee hours worked; and
  - (xiv) Train miles.
- (2) For each instance counted in the totals reported in paragraphs (b)(1)(i) through (xii) of this section, a railroad's annual report must clearly identify each instance by date and location and provide a complete factual description of the event.
- (c) The annual report must also include written confirmation that the risk assessment for operations receiving special approval under this subpart, including all calculations and assumptions, remains unchanged and that no technology changes have been implemented or new or additional hazards identified.
- (1) If any risk assessment calculation or assumption changes for an operation receiving special approval under this subpart, a new or updated risk assessment meeting the requirements of § 218.133 must be prepared and submitted with the railroad's annual report. This annual reporting requirement does not negate the requirement to submit a new or updated risk assessment when making a material modification to an operation as required in § 218.135.
- (2) Any new or updated risk assessment submitted in accordance with paragraph (c) of this section must include a written plan and schedule for implementing any mitigations required to address any newly identified hazards.
- (d) FRA will review and respond to a railroad's annual report submission in accordance with paragraph (a) of this section by September 30 of the year it is submitted.
- (1) FRA's response may include advice or recommendations; and
- (2) For a one-person train crew operation receiving special approval under this subpart, FRA may reopen consideration of a petition under § 218.135 based on a finding that a railroad's annual report submission suggests that the petition does not comply with the requirements of this subpart or that the operation is no longer as safe or safer than a two-person train crew operation.

## Appendix A to Part 218 [Reserved]

## Appendix B to Part 218—Statement of Agency Enforcement Policy on Blue Signal Protection for Utility Employees

The following examples of the application of the train or yard crew exclusion from required blue signal protection for utility employees are provided to clarify FRA's enforcement policy. In the first four examples, the utility employee is properly attached to and functioning as member of a train or yard crew and is excluded from blue signal protection, provided all the conditions specified in § 218.22 are met:

*Example 1:* A utility employee assists a train crew by adding or reducing railroad cars to or from the train.

The utility employee may perform any duties which would normally be conducted by members of the train crew, i.e., setting or releasing handbrakes, coupling air hoses and other connections, prepare rail cars for coupling, and perform air brake tests.

*Example 2:* A utility employee is assigned to assist a yard crew for the purpose of classifying and assembling railroad cars. The yard crew onboard their locomotive arrives at the location in the yard where the work is to be performed. At that time, the utility employee may attach himself to the yard crew and commence duties as a member of that yard crew.

*Example 3:* A utility employee is assigned to inspect, test, remove and replace if necessary, a combination rear end marking device/end of train device on a through freight train. The utility employee attaches himself to the train crew after the arrival of the train and its crew at the location where this work is to be conducted. He may then perform duties as a member of that crew.

*Example 4:* A railroad manager who properly attaches himself as a utility employee to a train or yard crew, in accordance with § 218.22, may then function as a member of the train or yard crew under the exclusion provided for train and yard crews.

Note: In the last four examples, any railroad employee, including regularly assigned crew members, would need blue signal protection to perform the described function.

*Example 5:* Prior to the arrival of a through freight train, a utility employee installs an end-of-train device on one end of a block of railroad cars that are scheduled to be picked up by the freight train.

*Example 6:* A railroad employee attaches himself to a train or yard crew while the crew is in the ready room preparing to take charge of their train. Prior to the train crew leaving the ready room and taking charge of the equipment, the employee couples air hoses and other connections between the locomotives.

*Example 7:* A railroad employee is attached to a train crew after the train crew has taken charge of the train. It is necessary for the employee to perform a repair on a rail car, such as replacing a brake shoe, in addition to those duties normally performed by train or yard crew members.

*Example 8:* A train or yard crew, supplemented by three utility employees, has an assigned locomotive and train. The regular crew, including the engineer, has left the train to eat lunch. The utility employees have remained with the train and are coupling air hoses between rail cars in the train.

[58 FR 43293, Aug. 16, 1993]

## **Appendix C to Part 218—Statement of Agency Enforcement Policy on Tampering**

The Rail Safety Improvement Act of 1988 (Pub. L. 100-342, enacted June 22, 1988) (“RSIA”) raised the maximum civil penalties available under the railroad safety laws and made individuals liable for willful violations of those laws. Section 21 of the RSIA requires that FRA adopt regulations addressing three related but distinct aspects of problems that can occur when safety devices are tampered with or disabled. It requires that FRA make it unlawful for (i) any individual to willfully tamper with or disable a device; (ii) any individual to knowingly operate or permit to be operated a train with a tampered or disabled device; and (iii) any railroad to operate such a train.

Because the introduction of civil penalties against individuals brings FRA's enforcement of the rail safety laws into a new era and because the changes being introduced by this regulation are so significant, FRA believes that it is advisable to set forth the manner in which it will exercise its enforcement authority under this regulation.

### **Safety Devices Covered by This Rule**

FRA has employed a functional description of what constitutes a safety device under this rule. FRA's wording effectively identifies existing equipment and is sufficiently expansive to cover equipment that may appear in the future, particularly devices associated with advanced train control systems currently undergoing research testing.

FRA has been advised by portions of the regulated community that its functional definition has some potential for confusing people who read the rule without the benefit of the preamble discussions concerning the meaning of this definition. Since this rule is specifically intended to preclude misconduct by individuals, FRA wants this rule to be easily comprehended by all who read it. To achieve that clarity, FRA has decided to specify which types of equipment it considers to be within the scope of this rule and provide some examples of equipment that is not covered. In addition, FRA is ready and willing to respond in writing to any inquiry about any other devices that a party believes are treated ambiguously under this rule. This regulation applies to a variety of devices including equipment known as “event recorders,” “alerters,” “deadman controls,” “automatic cab signal,” “cab signal whistles,” “automatic train stop equipment,” “automatic train control equipment,” “positive train control equipment,” and “passenger locomotive-mounted image and audio recording equipment.” FRA does not consider the following equipment to be covered by this rule: Radios; monitors for end-of-train devices; bells or whistles that are not connected to alerters, deadman pedals, or signal system devices; fans for controlling interior temperature of locomotive cabs; and locomotive performance monitoring devices, unless they record data such as train speed and air brake operations. Although FRA considers such devices beyond the scope of the regulation, this does not imply that FRA condones the disabling of such devices. FRA will not hesitate to include such devices at a later date should instances of tampering with these devices be discovered. FRA does not currently perceive a need to directly proscribe tampering with such devices because there is no history of these devices being subjected to tampering.

### **Subsequent Operators of Trains With Disabled Devices**

Section 218.57 addresses instances in which one individual has tampered with a safety device and a second individual (a “subsequent operator”) knowingly operates a train or permits it to be operated, notwithstanding the presence of the disabled or tampered-with unit. The most common occurrence addressed by this provision is the situation in which a train crew encounters a locomotive with a safety device that has been tampered with prior to the crew's assuming responsibility for the locomotive. FRA has structured this provision and its attendant enforcement policy to reflect the fact that instances in which one individual encounters a locomotive that someone else has tampered with are relatively infrequent occurrences.

FRA's regulatory prohibition for subsequent operator conduct reflects the legal standard for individual culpability set forth in the RSIA. Under the relevant statutory standard ("knowingly operates or permits to be operated a train on which such devices have been tampered with or disabled by another person")—now incorporated into § 218.57—individuals could be held to a simple negligence standard of conduct, i.e., a standard of reasonable care under the circumstances. FRA's conclusion about the proper interpretation of the word "knowingly" stems from both normal canons of statutory construction and analysis of decisional law concerning the use of similar statutory constructs in the civil penalty context. It is also consistent with other Departmental interpretations of the word as used in similar contexts. (See 49 CFR 107.299, defining "knowingly" under the Hazardous Materials Transportation Act, 49 App. U.S.C. 1801 et seq.)

Under that statutory language, the responsible members of the crew could be culpable if either (1) due to their failure to exercise reasonable care, they failed to determine that the safety device was not functioning, or (2) having ascertained that the device was not functioning, still elected to operate the train. Similarly, railroad supervisors who permit or direct that a train with a disabled device be operated after having learned that the safety device is not functioning or after having failed to use reasonable care in the performance of their duties could also be subject to sanction.

However, as a matter of enforcement policy, application of a negligence standard in this particular context presently appears unwarranted. We have seen no evidence of an employee's negligent failure to detect another employee's tampering having caused a safety problem. FRA can effectively attack the known dimensions of the tampering problem by employing an enforcement policy that limits its enforcement actions to situations where individuals clearly had actual knowledge of the disabled device and intentionally operated the train notwithstanding that knowledge.

Therefore, FRA will not take enforcement action against an individual under § 218.57 absent a showing of such actual knowledge of the facts. Actual, subjective knowledge need not be demonstrated. It will suffice to show objectively that the alleged violator must have known the facts based on reasonable inferences drawn from the circumstances. For example, it is reasonable to infer that a person knows about something plainly in sight on the locomotive he is operating. Also, unlike the case where willfulness must be shown (see FRA's statement of policy at 49 CFR part 209, appendix A), knowledge of or reckless disregard for the law need not be shown to make out a violation of § 218.57. The knowledge relevant here is knowledge of the facts constituting the violation, not knowledge of the law.

Should FRA receive evidence indicating that a stricter enforcement policy is necessary to address the tampering problem, it will revise its enforcement policy to permit enforcement actions based only on a showing of the subsequent operator's negligent failure to detect the tampering, as the relevant provision of the RSIA permits it to do now. Any such change in enforcement policy will become effective only after publication of a revised version of this appendix.

*[54 FR 5492, Feb. 3, 1989. Redesignated and amended at 58 FR 43293, Aug. 16, 1993; 88 FR 70761, Oct. 12, 2023]*

## **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.

[73 FR 8504, Feb. 13, 2008]

### Appendix E to Part 218—Recommended Procedures for Conducting Risk Assessments

A railroad petitioning to operate with a one-person train crew in accordance with § 218.133 must prepare a risk-based hazard analysis that quantitatively and/or qualitatively demonstrates that the proposed operation using a one-person train crew will be as safe or safer than an operation using a two-person train crew under normal operation and in a degraded or failed state. This appendix provides one approach that may be used by a railroad to prepare a risk-based hazard analysis and compare the risks to determine if a proposed one-person train crew operation will be as safe or safer than a two-person minimum train crew operation, when all mitigations are in place. A railroad is not restricted to this approach and may use another formal safety methodology that fulfills the requirements of § 218.133.

### Quantitative Risk-Based Hazard Analysis

- (a) Identify new hazards, changes to existing hazards or changes to the risk of existing hazards of the one-person train crew operation, as compared to a two-person minimum train crew operation, as provided in § 218.133(a)(3)(i).
- (b) Calculate and/or update each risk of the one-person train crew operation, as compared to a two-person minimum train crew operation, by assessing each new hazard, change to an existing hazard and/or change to the risk of an existing hazard, in terms of the severity and likelihood of potential events using the following framework:

- (1) The assessment of the severity is measured as the worst-credible mishap resulting from the hazard and categorized in accordance with Table 1 of this paragraph (b)(1):

**TABLE 1 TO PARAGRAPH (b)(1)**

Category	Severity ranking (1 being the most severe)	Definition
SEVERITY CATEGORIES		
Catastrophic	1	Results in one or more of the following: fatality, irreversible significant environmental damage, or significant monetary loss. Accidents/incidents that must be reported to FRA telephonically under § 225.9 of this chapter are considered catastrophic.
Critical	2	Results in one or more of the following: significant injury (as defined in § 225.5 of this chapter), reversible significant environmental damage, or reportable monetary loss. Accidents/incidents that are not telephonically reported under § 225.9 of this chapter but are still FRA-reportable under § 225.19 of this chapter, are considered critical.
Marginal	3	Results in one or more of the following: minor injuries (i.e., injuries that are not significant as defined in § 225.5 of this chapter), reversible non-significant environmental damage, or monetary loss. Mishaps that are not FRA-reportable accidents/incidents but are considered accountable rail equipment accidents/incidents as defined in § 225.5 of this chapter, are considered marginal.
Negligible	4	Results in one or more of the following: no injuries, no environmental damage, or equipment or railroad structure damage(s) that do not require

Category	Severity ranking (1 being the most severe)	Definition
		repair.

(2) The assessment of probability of occurrence as defined in Table 2 of this paragraph (b)(2):

**TABLE 2 TO PARAGRAPH (b)(2)**

Description	Level	Qualitative characterization of probability	Quantitative characterization of probability <sup>1</sup>
PROBABILITY LEVELS			
FREQUENT	A	Likely to occur frequently	Greater than once every 1,000 operating hours.
PROBABLE	B	Likely to occur several times	Between once every 1,000 hours and once every 100,000 hours.
OCCASIONAL	C	Likely to occur once, but not several times	Between once every 100,000 hours and once every 10,000,000 hours.
REMOTE	D	Unlikely but possible to occur	Between once every 10,000,000 hours and once every 1,000,000,000 hours.
IMPROBABLE	E	So unlikely that it can be assumed the occurrence may not be experienced	Less than once every 1,000,000,000 hours.

<sup>1</sup> Probability of a hazard occurring per 1,000 operating hours.

(c) Applying the sustained mitigation strategies designed and implemented in accordance with § 218.133(a)(4), recalculate the risk using the framework documented in paragraph (b) of this appendix.

- (d) Prepare a risk matrix in the format of Table 3 of this paragraph (d) that classifies the risks calculated in paragraph (c) of this appendix in terms of severity and likelihood of each new hazard, change to an existing hazard, or change to the risk of an existing hazard as follows:

**TABLE 3 TO PARAGRAPH (d)**

Probability	Severity			
	(1) Catastrophic	(2) Critical	(3) Marginal	(4) Negligible
RISK MATRIX				
(A) FREQUENT	1A	2A	3A	4A
(B) PROBABLE	1B	2B	3B	
(C) OCCASIONAL	1C	2C	3C	4C
(D) REMOTE	1D	2D	4D	
(E) IMPROBABLE	1E	3E	4E	

- (e) Prepare a risk report of the train operation staffed with a one-person train crew, as compared to a two-person minimum train crew operation, documenting the basis for acceptability of all new hazards, changes to existing hazards and/or changes to the risk of existing hazards identified in the matrix required by paragraph (d) of this appendix. The risk report should categorize the risk of each new hazard, change to existing hazard and/or change to the risk of an existing hazard as follows:
- (1) **Unacceptable.** Categories 1A, 1B, 1C, 1D, 2A, 2B, 2C, 3A, 3B, and 4A are unacceptable. A railroad should not file a petition for special approval with a new hazard, change to existing hazard and/or change to the risk of an existing hazard in this category as FRA will not approve an operation with a partially mitigated or unmitigated hazard that is categorized as unacceptable;
  - (2) **Acceptable under specific conditions.** Categories 1E, 2D, 3C, 3D, 4B, and 4C are acceptable under specific conditions. A railroad's risk report should describe why the railroad finds the conditions acceptable. A new hazard, change to existing hazard and/or change to the risk of an existing hazard will be acceptable under specific conditions if FRA finds that the one-person operation is as safe or safer than a two or more-person operation; and
  - (3) **Acceptable.** Categories 2E, 3E, 4D, and 4E are acceptable. FRA will not deny a petition for special approval solely on the basis an appropriately categorized acceptable new hazard, change to existing hazard and/or change to the risk of an existing hazard if the one-person operation is as safe or safer than a two-person minimum operation.
- (f) Provide a statement with supporting evidence, that the one-person operation with a fully implemented mitigation plan, is as safe or safer than a two-person minimum operation.

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