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## **Title 49 —Transportation**

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

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

##### **Part 210 Railroad Noise Emission Compliance Regulations**

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## **PART 210—RAILROAD NOISE EMISSION COMPLIANCE REGULATIONS**

**Authority:** Sec. 17, Pub. L. 92-574, 86 Stat. 1234 (42 U.S.C. 4916); 49 CFR 1.89.

**Source:** 48 FR 56758, Dec. 23, 1983, unless otherwise noted.

### **Subpart A—General Provisions**

## § 210.1 Scope of part.

This part prescribes minimum compliance regulations for enforcement of the Railroad Noise Emission Standards established by the Environmental Protection Agency in 40 CFR part 201.

## § 210.3 Applicability.

- (a) Except as provided in paragraph (b) of this section, the provisions of this part apply to the total sound emitted by moving rail cars and locomotives (including the sound produced by refrigeration and air conditioning units that are an integral element of such equipment), active retarders, switcher locomotives, car coupling operations, and load cell test stands, operated by a railroad as defined in 45 U.S.C. 22, under the conditions described in this part and in 40 CFR part 201.
- (b) The provisions of this part do not apply to—
  - (1) Steam locomotives;
  - (2) Street, suburban, or interurban electric railways unless operated as a part of the general railroad system of transportation;
  - (3) Sound emitted by warning devices, such as horns, whistles, or bells when operated for the purpose of safety;
  - (4) Special purpose equipment that may be located on or operated from rail cars;
  - (5) As prescribed in 40 CFR 201.10, the provisions of 40 CFR 201.11 (a) and (b) and (c) do not apply to gas turbine powered locomotives or any locomotive type that cannot be connected by any standard method to a load cell; or
  - (6) Inert retarders.

[48 FR 56758, Dec. 23, 1983, as amended at 54 FR 33228, Aug. 14, 1989]

## § 210.5 Definitions.

- (a) **Statutory definitions.** All terms used in this part and defined in the Noise Control Act of 1972 (42 U.S.C. 4901 et seq.) have the definition set forth in that Act.
- (b) **Definitions in standards.** All terms used in this part and defined in § 201.1 of the Railroad Noise Emission Standards, 40 CFR 201.1, have the definition set forth in that section.
- (c) **Additional definitions.** As used in this part—

**Administrator** means the Federal Railroad Administrator, the Deputy Administrator, or any official of FRA to whom the Administrator has delegated authority to act in the Administrator's stead.

**Consist of a locomotive and rail cars** means one or more locomotives coupled to a rail car or rail cars.

**FRA** means the Federal Railroad Administration.

**Inert retarder** means a device or system for holding a classified cut of cars and preventing it from rolling out the bottom of a railyard.

**Inspector** means FRA inspectors or FRA specialists.

*Noise defective* means the condition in which railroad equipment is found to exceed the Railroad Noise Emission Standards, 40 CFR part 201.

*Railroad equipment* means rail cars, locomotives, active retarders, and load cell test stands.

*Standards* means the Railroad Noise Emission Standards, 40 CFR part 201. (See appendix A in this part for a listing.)

### **§ 210.7 Responsibility for noise defective railroad equipment.**

Any railroad that uses railroad equipment that is noise defective or engages in a car coupling operating that results in excessive noise according to the criteria established in this part and in the Standards is responsible for compliance with this part. Subject to § 210.9, such railroad shall—

- (a) Correct the noise defect;
- (b) Remove the noise defective railroad equipment from service; or
- (c) Modify the car coupling procedure to bring it within the prescribed noise limits.

### **§ 210.9 Movement of a noise defective locomotive, rail car, or consist of a locomotive and rail cars.**

A locomotive, rail car, or consist of a locomotive and rail cars that is noise defective may be moved no farther than the nearest forward facility where the noise defective conditions can be eliminated only after the locomotive, rail car, or consist of a locomotive and rail cars has been inspected and been determined to be safe to move.

### **§ 210.11 Waivers.**

- (a) Any person may petition the Administrator for a waiver of compliance with any requirement in this part. A waiver of compliance with any requirement prescribed in the Standards may not be granted under this provision.
- (b) Each petition for a waiver under this section must be filed in the manner and contain information required by 49 CFR part 211.
- (c) If the Administrator finds that a waiver of compliance applied for under paragraph (a) of this section is in the public interest and is consistent with railroad noise abatement and safety, the Administrator may grant a waiver subject to any condition he deems necessary. Notice of each waiver granted, including a statement of the reasons therefor, will be published in the FEDERAL REGISTER.

### **§ 210.13 Penalty.**

Any person who operates railroad equipment subject to the Standards in violation of any requirement of this part or of the Standards is liable to penalty as prescribed in section 11 of the Noise Control Act of 1972 (42 U.S.C. 4910), as amended.

## **Subpart B—Inspection and Testing**

### **§ 210.21 Scope of subpart.**

This subpart prescribes the compliance criteria concerning the requirements for inspection and testing of railroad equipment or operations covered by the Standards.

### § 210.23 Authorization.

- (a) An inspector is authorized to perform any noise test prescribed in the Standards and in the procedures of this part at any time, at any appropriate location, and without prior notice to the railroad, for the purpose of determining whether railroad equipment is in compliance with the Standards.
- (b)
  - (1) An inspector is authorized to request that railroad equipment and appropriate railroad personnel be made available for a passby or stationary noise emission test, as prescribed in the Standards and in the procedures of this part, and to conduct such test, at a reasonable time and location, for the purpose of determining whether the railroad equipment is in compliance with the Standards.
  - (2) If the railroad has the capability to perform an appropriate noise emission test, as prescribed in the Standards and in the procedures of this part, an inspector is authorized to request that the railroad test railroad equipment. The railroad shall perform the appropriate test as soon as practicable.
  - (3) The request referred to in this paragraph will be in writing, will state the grounds upon which the inspector has reason to believe that the railroad equipment does not conform to the Standards, and will be presented to an appropriate operating official of the railroad.
  - (4) Testing or submission for testing is not required if the cause of the noise defect is readily apparent and the inspector verifies that it is corrected by the replacement of defective components or by instituting a normal maintenance or repair procedure.
- (c)
  - (1) An inspector is authorized to inspect or examine a locomotive, rail car, or consist of a locomotive and rail cars operated by a railroad, or to request that the railroad inspect or examine the locomotive, rail car, or consist of a locomotive and rail cars, whenever the inspector has reason to believe that it does not conform to the requirements of the Standards.
  - (2) An inspector may request that a railroad conduct an inspection or examination of a locomotive, rail car, or consist of a locomotive and rail cars on the basis of an excessive noise emission level measured by a passby test. If, after such inspection or examination, no mechanical condition that would result in a noise defect can be found and the inspector verifies that no such mechanical condition exists, the locomotive, rail car, or consist of a locomotive and rail cars may be continued in service.
  - (3) The requests referred to in this paragraph will be in writing, will state the grounds upon which the inspector has reason to believe that the locomotive, rail car, or consist of a locomotive and rail cars does not conform to the Standards, and will be presented to an appropriate operating official of the railroad.
  - (4) The inspection or examination referred to in this paragraph may be conducted only at recognized inspection points or scheduled stopping points.

### § 210.25 Measurement criteria and procedures.

The parameters and procedures for the measurement of the noise emission levels are prescribed in the Standards.

- (a) Quantities measured are defined in § 201.21 of the Standards.

- (b) Requirements for measurement instrumentation are prescribed in § 201.22 of the Standards. In addition, the following calibration procedures shall be used:
  - (1)
    - (i) The sound level measurement system including the microphone shall be calibrated and appropriately adjusted at one or more nominal frequencies in the range from 250 through 1000 Hz at the beginning of each series of measurements, at intervals not exceeding 1 (one) hour during continual use, and immediately following a measurement indicating a violation.
    - (ii) The sound level measurement system shall be checked not less than once each year by its manufacturer, a representative of its manufacturer, or a person of equivalent special competence to verify that its accuracy meets the manufacturer's design criteria.
  - (2) An acoustical calibrator of the microphone coupler type designed for the sound level measurement system in use shall be used to calibrate the sound level measurement system in accordance with paragraph (b)(1)(i) of this section. The calibration must meet or exceed the accuracy requirements specified in section 5.4.1 of the American National Standard Institute Standards, "Method for Measurement of Sound Pressure Levels," (ANSI S1.13-1971) for field method measurements.
- (c) Acoustical environment, weather conditions, and background noise requirements are prescribed in § 201.23 of the Standards. In addition, a measurement tolerance of 2 dB(A) for a given measurement will be allowed to take into account the effects of the factors listed below and the interpretations of these effects by enforcement personnel:
  - (1) The common practice of reporting field sound level measurements to the nearest whole decibel;
  - (2) Variations resulting from commercial instrument tolerances;
  - (3) Variations resulting from the topography of the noise measurement site;
  - (4) Variations resulting from atmospheric conditions such as wind, ambient temperature, and atmospheric pressure; and
  - (5) Variations resulting from reflected sound from small objects allowed within the test site.

#### **§ 210.27 New locomotive certification.**

- (a) A railroad shall not operate a locomotive built after December 31, 1979, unless the locomotive has been certified to be in compliance with the Standards.
- (b) The certification prescribed in this section shall be determined for each locomotive model, by either—
  - (1) Load cell testing in accordance with the criteria prescribed in the Standards; or
  - (2) Passby testing in accordance with the criteria prescribed in the Standards.
- (c) If passby testing is used under paragraph (b)(2) of this section, it shall be conducted with the locomotive operating at maximum rated horsepower output.

[48 FR 56758, Dec. 23, 1983, as amended at 84 FR 15145, Apr. 15, 2019]

### § 210.29 Operation standards (moving locomotives and rail cars).

The operation standards for the noise emission levels of moving locomotives, rail cars, or consists of locomotives and rail cars are prescribed in the Standards and duplicated in appendix A of this part.

- (a) Measurements for compliance shall be made in compliance with the provisions of subpart C of the Standards and the following:
  - (1) Consists of locomotives containing at least one locomotive unit manufactured prior to December 31, 1979, shall be evaluated for compliance in accordance with § 201.12(a) of the Standards, unless a locomotive within the consist is separated by at least 10 rail car lengths or 500 feet from other locomotives in the consist, in which case such separated locomotives may be evaluated for compliance according to their respective built dates.
  - (2) Consists of locomotives composed entirely of locomotive units manufactured after December 31, 1979, shall be evaluated for compliance in accordance with § 201.12(b) of the Standards.
  - (3) If the inspector cannot establish the built dates of all locomotives in a consist of locomotives measured under moving conditions, evaluation for compliance shall be made in accordance with § 201.12(a) of the Standards.
- (b) Noise emission standards for rail cars operating under moving conditions are contained in § 201.13 of the Standards and are stated in appendix A of this part. If speed measurement equipment used by the inspector at the time of the measurement is not operating within an accuracy of 5 miles per hour, evaluation for compliance shall be made in accordance with § 201.13(2) of the Standards.
- (c) Locomotives and rail cars tested pursuant to the procedures prescribed in this part and in the Standards shall be considered in noncompliance whenever the test measurement, minus the appropriate tolerance (§ 210.25), exceeds the noise emission levels prescribed in appendix A of this part.

### § 210.31 Operation standards (stationary locomotives at 30 meters).

- (a) For stationary locomotives at load cells:
  - (1) Each noise emission test shall begin after the engine of the locomotive has attained the normal cooling water operating temperature as prescribed by the locomotive manufacturer.
  - (2) Noise emission testing in idle or maximum throttle setting shall start after a 40 second stabilization period in the throttle setting selected for the test.
  - (3) After the stabilization period as prescribed in paragraph (a)(2) of this section, the A-weighted sound level reading in decibels shall be observed for an additional 30-second period in the throttle setting selected for the test.
  - (4) The maximum A-weighted sound level reading in decibels that is observed during the 30-second period of time prescribed in paragraph (a)(3) of this section shall be used for test measurement purposes.
- (b) The following data determined by any locomotive noise emission test conducted after December 31, 1976, shall be recorded in the "Remarks" section on the reverse side of Form F 6180.49:
  - (1) Location of test;
  - (2) Type of test;

- (3) Date of test; and
- (4) The A-weighted sound level reading in decibels obtained during the passby test, or the readings obtained at idle throttle setting and maximum throttle setting during a load cell test.
- (c) Any locomotive subject to this part that is found not to be in compliance with the Standards as a result of a passby test shall be subjected to a load cell test or another passby test prior to return to service, except that no such retest shall be required if the cause of the noise defect is readily apparent and is corrected by the replacement of defective components or by a normal maintenance or repair procedure.
- (d) The last entry recorded on Form F 6180.49 as required in paragraph (b) of this section shall be transcribed to a new Form FRA F 6180.49 when it is posted in the locomotive cab.
- (e) Locomotives tested pursuant to the procedures prescribed in this part and in the Standards shall be considered in noncompliance wherever the test measurement, minus the appropriate tolerance (§ 210.25), exceeds the noise emission levels prescribed in appendix A of this part.

### § 210.33 Operation standards (switcher locomotives, load cell test stands, car coupling operations, and retarders).

- (a) Measurement on receiving property of the noise emission levels from switcher locomotives, load cell test stands, car coupling operations, and retarders shall be performed in accordance with the requirements of 40 CFR part 201 and § 210.25 of this part.
- (b) These sources shall be considered in noncompliance whenever the test measurement, minus the appropriate tolerance (§ 210.25), exceeds the noise emission levels prescribed in appendix A of this part.

### Appendix A to Part 210—Summary of Noise Standards, 40 CFR Part 201

Paragraph and section	Noise source	Noise standard—A weighted sound level in dB	Noise measure <sup>1</sup>	Measurement location
201.11(a)	<i>All Locomotives Manufactured on or Before 31 December 1979</i>			
	Stationary, Idle Throttle Setting	73	L <sub>max</sub> (slow)	30 m (100 ft)
	Stationary, All Other Throttle Settings	93	.....do	Do.
201.12(a)	Moving	96	L <sub>max</sub> (fast)	Do.
201.11(b)	<i>All Locomotives Manufactured After 31 December 1979</i>			
	Stationary, Idle Throttle Setting	70	L <sub>max</sub>	Do.

<sup>1</sup> L<sub>max</sub> = Maximum sound level; L<sub>90</sub> = Statistical sound level exceeded 90% of the time; L<sub>adjavemax</sub> = Adjusted average maximum sound level.

<sup>2</sup> L<sub>90</sub> must be validated by determining that L<sub>10</sub>-L<sub>90</sub> is less than or equal to 4dB (A).

Paragraph and section	Noise source	Noise standard—A weighted sound level in dB	Noise measure <sup>1</sup>	Measurement location
201.11(b)	Stationary, All Other Throttle Settings	87	(slow) .....do	Do.
201.12(b)	Moving	90	L <sub>max</sub> (fast)	Do.
201.11(c) and 201.12(c)	<i>Additional Requirement for Switcher Locomotives Manufactured on or Before 31 December 1979 Operating in Yards Where Stationary Switcher and other Locomotive Noise Exceeds the Receiving Property Limit of</i>	65	L <sub>90</sub> (fast) <sup>2</sup>	Receiving property
201.11(c)	Stationary, Idle Throttle Setting	70	L <sub>max</sub> (slow)	30 m (100 ft)
201.11(c)	Stationary, All Other Throttle Settings	87	.....do	Do.
201.12(c)	Moving	90	L <sub>max</sub> (fast)	Do.
	<i>Rail Cars</i>			
201.13(1)	Moving at Speeds of 45 mph or Less	88	.....do	Do.
201.13(2)	Moving at Speeds Greater than 45 mph	93	.....do	Do.
	<i>Other Yard Equipment and Facilities</i>			
201.14	Retarders	83	L <sub>adjavemax</sub> (fast)	Receiving property
201.15	Car-Coupling Operations	92	.....do	Do.
201.16	<i>Locomotive Load Cell Test Stands, Where the Noise from Locomotive Load Cell Operations Exceeds the Receiving Property Limits of</i>	65	L <sub>90</sub> (fast) <sup>2</sup>	Do.
201.16(a)	Primary Standard	78	L <sub>max</sub> (slow)	30 m (100 ft).
201.16(b)	Secondary Standard if 30-m Measurement Not Feasible	65	L <sub>90</sub> (fast)	Receiving property located more than 120 m from Load Cell.

<sup>1</sup> L<sub>max</sub> = Maximum sound level; L<sub>90</sub> = Statistical sound level exceeded 90% of the time; L<sub>adjavemax</sub> = Adjusted average maximum sound level.

<sup>2</sup> L<sub>90</sub> must be validated by determining that L<sub>10</sub>-L<sub>99</sub> is less than or equal to 4dB (A).

[48 FR 56758, Dec. 23, 1983; 49 FR 1521, Jan. 12, 1984]



## **Appendix B to Part 210—Switcher Locomotive Enforcement Policy**

The EPA standards require that the noise emissions from all switcher locomotives in a particular facility be less than prescribed levels measured at 30 meters, under all operating modes. This requirement is deemed to be met unless “receiving property” noise due to switcher locomotives exceeds 65 dB(A), when measured in accordance with subpart C of 40 CFR part 201. The 65 dB(A) receiving property standard is the “trigger” for requiring the 30-meter test of switcher locomotives.

The purpose underlying FRA's enforcement of the noise standards is to reduce the impact of rail operations noise on receiving properties. In some instances, measures other than the 30-meter test approach may more effectively reduce the noise levels at receiving properties; therefore, FRA enforcement efforts will focus on abatement procedures that will achieve a reduction of receiving property noise levels to less than 65 dB(A).

For example, a parked, idling locomotive, even if equipped with exhaust silencing that meets the stationary locomotive standard (30-meter test), may cause the receiving property standard to be exceeded if located on trackage adjacent to the receiving property. In that case, application of the 30-meter test to other switcher locomotives at the facility may not serve to reduce the receiving property noise level. On the other hand, operational changes by the railroad could significantly reduce receiving property noise levels. In such case, FRA would consider retesting after abatement measures have been taken. If the receiving property noise level is below the trigger and the abatement action is adopted, FRA would not make a 30-meter test of the switcher locomotives at the facility.