

## Federal Railroad Administration, DOT

## § 227.3

equipment component is a difference of two percentages which must be divided by 100 to present it in a consistent fractional form. After performing the calculation, the result is rounded to the nearest \$100.

7. The weightings result from using STB wage data and BLS equipment cost data to produce a reasonable estimation of the reporting threshold that was calculated using the threshold formula in effect immediately before calendar year 2006, a formula that assumed damage repair costs, at levels at or near the threshold, were split approximately evenly between labor and materials.

8. Formula:

$$\text{New Threshold} = \text{Prior Threshold} \times [1 + 0.4(\text{Wnew} - \text{Wprior})/\text{Wprior} + 0.6(\text{Enew} - \text{Eprior})/100]$$

Where:

Wnew = New average hourly wage rate (\$).  
Wprior = Prior average hourly wage rate (\$).  
Enew = New equipment average PPI value.  
Eprior = Prior equipment average PPI value.

[70 FR 75417, Dec. 20, 2005]

## PART 227—OCCUPATIONAL NOISE EXPOSURE

### Subpart A—General

Sec.

- 227.1 Purpose and scope.
- 227.3 Application.
- 227.5 Definitions.
- 227.7 Preemptive effect.
- 227.9 Penalties.
- 227.11 Responsibility for compliance.
- 227.13 Waivers.
- 227.15 Information collection.

### Subpart B—Occupational Noise Exposure for Railroad Operating Employees

- 227.101 Scope and applicability.
- 227.103 Noise monitoring program.
- 227.105 Protection of employees.
- 227.107 Hearing conservation program.
- 227.109 Audiometric testing program.
- 227.111 Audiometric test requirements.
- 227.113 Noise operational controls.
- 227.115 Hearing protectors.
- 227.117 Hearing protector attenuation.
- 227.119 Training program.
- 227.121 Recordkeeping.

APPENDIX A TO PART 227—NOISE EXPOSURE COMPUTATION

APPENDIX B TO PART 227—METHODS FOR ESTIMATING THE ADEQUACY OF HEARING PROTECTOR ATTENUATION

APPENDIX C TO PART 227—AUDIOMETRIC BASELINE REVISION

APPENDIX D TO PART 227—AUDIOMETRIC TEST ROOMS

APPENDIX E TO PART 227—USE OF INSERT EARPHONES FOR AUDIOMETRIC TESTING

APPENDIX F TO PART 227—CALCULATIONS AND APPLICATION OF AGE CORRECTIONS TO AUDIOGRAMS

APPENDIX G TO PART 227—SCHEDULE OF CIVIL PENALTIES

AUTHORITY: 49 U.S.C. 20103, 20103 (note), 20701–20702; 49 CFR 1.49.

SOURCE: 71 FR 63123, Oct. 27, 2006, unless otherwise noted.

### Subpart A—General

#### § 227.1 Purpose and scope.

(a) The purpose of this part is to protect the occupational health and safety of employees whose predominant noise exposure occurs in the locomotive cab.

(b) This part prescribes minimum Federal health and safety noise standards for locomotive cab occupants. This part does not restrict a railroad or railroad contractor from adopting and enforcing additional or more stringent requirements.

#### § 227.3 Application.

(a) Except as provided in paragraph (b) of this section, this part applies to all railroads and contractors to railroads.

(b) This part does not apply to—

(1) A railroad that operates only on track inside an installation that is not part of the general railroad system of transportation;

(2) A rapid transit operation in an urban area that is not connected to the general railroad system of transportation;

(3) A rapid transit operation in an urban area that is connected to the general system and operates under a shared use waiver;

(4) A railroad that operates tourist, scenic, historic, or excursion operations, whether on or off the general railroad system of transportation; or

(5) Foreign railroad operations that meet the following conditions: Employees of the foreign railroad have a primary reporting point outside of the U.S. but are operating trains or conducting switching operations in the U.S.; and the government of that foreign railroad has implemented requirements for hearing conservation for railroad employees; the foreign railroad undertakes to comply with those requirements while operating within

## § 227.5

## 49 CFR Ch. II (10–1–07 Edition)

the U.S.; and FRA's Associate Administrator for Safety determines that the foreign requirements are consistent with the purpose and scope of this part. A "foreign railroad" refers to a railroad that is incorporated in a place outside the U.S. and is operated out of a foreign country but operates for some distance in the U.S.

### § 227.5 Definitions.

As used in this part—

*Action level* means an eight-hour time-weighted-average sound level (TWA) of 85 dB(A), or, equivalently, a dose of 50 percent, integrating all sound levels from 80 dB(A) to 140 dB(A).

*Administrator* means the Administrator of the Federal Railroad Administration or the Administrator's delegate.

*Artifact* means any signal received or recorded by a noise measuring instrument that is not related to occupational noise exposure and may adversely impact the accuracy of the occupational noise measurement.

*Audiogram* means a record of audiometric testing, showing the thresholds of hearing sensitivity measured at discrete frequencies, as well as other recordkeeping information.

*Audiologist* means a professional, who provides comprehensive diagnostic and treatment/rehabilitative services for auditory, vestibular, and related impairments and who

(1) Has a Master's degree or doctoral degree in audiology and

(2) Is licensed as an audiologist by a State; or in the case of an individual who furnishes services in a State which does not license audiologists, has successfully completed 350 clock hours of supervised clinical practicum (or is in the process of accumulating such supervised clinical experience), performed not less than 9 months of supervised full-time audiology services after obtaining a master's or doctoral degree in audiology or a related field, and successfully completed a national examination in audiology approved by the Secretary of the U.S. Department of Health and Human Services.

*Audiometry* means the act or process of measuring hearing sensitivity at discrete frequencies. Audiometry can also be referred to as audiometric testing.

*Baseline audiogram* means an audiogram, recorded in accordance with § 227.109, against which subsequent audiograms are compared to determine the extent of change of hearing level.

*Class I, Class II, and Class III railroads* have the meaning assigned by the regulations of the Surface Transportation Board (49 CFR part 120; General Instructions 1–1).

*Continuous noise* means variations in sound level that involve maxima at intervals of 1 second or less.

*Decibel (dB)* means a unit of measurement of sound pressure levels.

*dB(A)* means the sound pressure level in decibels measured on the A-weighted scale.

*Employee* means any 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 part.

*Exchange rate* means the change in sound level, in decibels, which would require halving or doubling of the allowable exposure time to maintain the same noise dose. For purposes of this part, the exchange rate is 5 decibels.

*FRA* means the Federal Railroad Administration.

*Hearing protector* means any device or material, which is capable of being worn on the head, covering the ear canal or inserted in the ear canal; is designed wholly or in part to reduce the level of sound entering the ear; and has a scientifically accepted indicator of its noise reduction value.

*Hertz (Hz)* means a unit of measurement of frequency numerically equal to cycles per second.

*Medical pathology* means a condition or disease affecting the ear which is medically or surgically treatable.

*Noise operational controls* means a method used to reduce noise exposure, other than hearing protectors or equipment modifications, by reducing the time a person is exposed to excessive noise.

*Occasional service* means service of not more than a total of 20 days in a calendar year.

*Otolaryngologist* means a physician specializing in diagnosis and treatment of disorders of the ear, nose, and throat.