

## SUBCHAPTER M—UNIFORM MINE HEALTH REGULATIONS

### PART 62—OCCUPATIONAL NOISE EXPOSURE

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#### APPENDIX TO PART 62

AUTHORITY: 30 U.S.C. 811.

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#### § 62.100 Purpose and scope; effective date.

The purpose of these standards is to prevent the occurrence and reduce the progression of occupational noise-induced hearing loss among miners. This part sets forth mandatory health standards for each surface and underground metal, nonmetal, and coal mine subject to the Federal Mine Safety and Health Act of 1977. The provisions of this part become effective September 13, 2000.

#### § 62.101 Definitions.

The following definitions apply in this part:

*Access.* The right to examine and copy records.

*Action level.* An 8-hour time-weighted average sound level (TWA<sub>8</sub>) of 85 dBA, or equivalently a dose of 50%, integrating all sound levels from 80 dBA to at least 130 dBA.

*Audiologist.* A professional, specializing in the study and rehabilitation of hearing, who is certified by the American Speech-Language-Hearing Asso-

ciation (ASHA) or licensed by a state board of examiners.

*Baseline audiogram.* The audiogram recorded in accordance with § 62.170(a) of this part against which subsequent audiograms are compared to determine the extent of hearing loss.

*Criterion level.* The sound level which if constantly applied for 8 hours results in a dose of 100% of that permitted by the standard.

*Decibel (dB).* A unit of measure of sound pressure levels, defined in one of two ways, depending upon the use:

(1) For measuring sound pressure levels, the decibel is 20 times the common logarithm of the ratio of the measured sound pressure to the standard reference sound pressure of 20 micropascals (μPa), which is the threshold of normal hearing sensitivity at 1000 Hertz (Hz).

(2) For measuring hearing threshold levels, the decibel is the difference between audiometric zero (reference pressure equal to 0 hearing threshold level) and the threshold of hearing of the individual being tested at each test frequency.

*Dual Hearing Protection Level.* A TWA<sub>8</sub> of 105 dBA, or equivalently, a dose of 800% of that permitted by the standard, integrating all sound levels from 90 dBA to at least 140 dBA.

*Exchange rate.* The amount of increase in sound level, in decibels, which would require halving of the allowable exposure time to maintain the same noise dose. For the purposes of this part, the exchange rate is 5 decibels (5 dB).

*Hearing protector.* Any device or material, capable of being worn on the head or in the ear canal, sold wholly or in part on the basis of its ability to reduce the level of sound entering the ear, and which has a scientifically accepted indicator of noise reduction value.

*Hertz (Hz).* Unit of measurement of frequency numerically equal to cycles per second.

*Medical pathology.* A condition or disease affecting the ear.

*Miner's designee.* Any individual or organization to whom a miner gives

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written authorization to exercise a right of access to records.

*Qualified technician.* A technician who has been certified by the Council for Accreditation in Occupational Hearing Conservation (CAOHC), or by another recognized organization offering equivalent certification.

*Permissible exposure level.* A  $TWA_8$  of 90 dBA or equivalently a dose of 100% of that permitted by the standard, integrating all sound levels from 90 dBA to at least 140 dBA.

*Reportable hearing loss.* A change in hearing sensitivity for the worse, relative to the miner's baseline audiogram, or the miner's revised baseline audiogram where one has been established in accordance with § 62.170(c)(2), of an average of 25 dB or more at 2000, 3000, and 4000 Hz in either ear.

*Revised baseline audiogram.* An annual audiogram designated to be used in lieu of a miner's original baseline audiogram in measuring changes in hearing sensitivity as a result of the circumstances set forth in §§ 62.170(c)(1) or 62.170(c)(2) of this part.

*Sound level.* The sound pressure level in decibels measured using the A-weighting network and a slow response, expressed in the unit dBA.

*Standard threshold shift.* A change in hearing sensitivity for the worse relative to the miner's baseline audiogram, or relative to the most recent revised baseline audiogram where one has been established, of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear.

*Time-weighted average-8 hour ( $TWA_8$ ).* The sound level which, if constant over 8 hours, would result in the same noise dose as is measured.

### § 62.110 Noise exposure assessment.

(a) The mine operator must establish a system of monitoring that evaluates each miner's noise exposure sufficiently to determine continuing compliance with this part.

(b) The mine operator must determine a miner's noise dose (D, in percent) by using a noise dosimeter or by computing the formula:  $D=100(C_1/T_1+C_2/T_2+\dots+C_n/T_n)$ , where  $C_n$  is the total time the miner is exposed at a specified sound level, and  $T_n$  is the reference du-

ration of exposure at that sound level shown in Table 62-1.

(1) The mine operator must use Table 62-2 when converting from dose readings to equivalent  $TWA_8$  readings.

(2) A miner's noise dose determination must:

(i) Be made without adjustment for the use of any hearing protector;

(ii) Integrate all sound levels over the appropriate range;

(iii) Reflect the miner's full work shift;

(iv) Use a 90-dB criterion level and a 5-dB exchange rate; and

(v) Use the A-weighting and slow response instrument settings.

(c) *Observation of monitoring.* The mine operator must provide affected miners and their representatives with an opportunity to observe noise exposure monitoring required by this section and must give prior notice of the date and time of intended exposure monitoring to affected miners and their representatives.

(d) *Miner notification.* The mine operator must notify a miner of his or her exposure when the miner's exposure is determined to equal or exceed the action level, exceed the permissible exposure level, or exceed the dual hearing protection level, provided the mine operator has not notified the miner of an exposure at such level within the prior 12 months. The mine operator must base the notification on an exposure evaluation conducted either by the mine operator or by an authorized representative of the Secretary of Labor. The mine operator must notify the miner in writing within 15 calendar days of:

(1) The exposure determination; and  
(2) the corrective action being taken.

(e) The mine operator must maintain a copy of any such miner notification, or a list on which the relevant information about that miner's notice is recorded, for the duration of the affected miner's exposure at or above the action level and for at least 6 months thereafter.

### § 62.120 Action level.

If during any work shift a miner's noise exposure equals or exceeds the action level the mine operator must