

street clothes and separate storage facilities for the protective clothing shall be provided.

[44 FR 8577, Feb. 9, 1979; 44 FR 20940, Apr. 6, 1979, as amended at 58 FR 35084, June 30, 1993]

**§ 1926.52 Occupational noise exposure.**

(a) Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in Table D-2 of this section when measured on the A-scale of a standard sound level meter at slow response.

(b) When employees are subjected to sound levels exceeding those listed in Table D-2 of this section, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of the table, personal protective equipment as required in subpart E, shall be provided and used to reduce sound levels within the levels of the table.

(c) If the variations in noise level involve maxima at intervals of 1 second or less, it is to be considered continuous.

(d)(1) In all cases where the sound levels exceed the values shown herein, a continuing, effective hearing conservation program shall be administered.

TABLE D-2—PERMISSIBLE NOISE EXPOSURES

| Duration per day, hours | Sound level<br>dBA slow<br>response |
|-------------------------|-------------------------------------|
| 8 .....                 | 90                                  |
| 6 .....                 | 92                                  |
| 4 .....                 | 95                                  |
| 3 .....                 | 97                                  |
| 2 .....                 | 100                                 |
| 1½ .....                | 102                                 |
| 1 .....                 | 105                                 |
| ½ .....                 | 110                                 |
| ¼ or less .....         | 115                                 |

(2)(i) When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each. Exposure to different levels for various periods of time shall be computed according to the formula set forth in paragraph (d)(2)(ii) of this section.

$$(ii) F_c = (T_1/L_1) + (T_2/L_2) + \dots + (T_n/L_n)$$

Where:

$F_c$  = The equivalent noise exposure factor.

$T$  = The period of noise exposure at any essentially constant level.

$L$  = The duration of the permissible noise exposure at the constant level (from Table D-2).

If the value of  $F_c$  exceeds unity (1) the exposure exceeds permissible levels.

(iii) A sample computation showing an application of the formula in paragraph (d)(2)(ii) of this section is as follows. An employee is exposed at these levels for these periods:

- 110 db A ¼ hour.
- 100 db A ½ hour.
- 90 db A 1½ hours.

$$F_c = (1/4)^{1/2} + (1/2)^2 + (1 1/2)^3/8$$

$$F_c = 0.500 + 0.25 + 0.188$$

$$F_c = 0.938$$

Since the value of  $F_c$  does not exceed unity, the exposure is within permissible limits.

(e) Exposure to impulsive or impact noise should not exceed 140 dB peak sound pressure level.

**§ 1926.53 Ionizing radiation.**

(a) In construction and related activities involving the use of sources of ionizing radiation, the pertinent provisions of the Nuclear Regulatory Commission's Standards for Protection Against Radiation (10 CFR part 20), relating to protection against occupational radiation exposure, shall apply.

(b) Any activity which involves the use of radioactive materials or X-rays, whether or not under license from the Nuclear Regulatory Commission, shall be performed by competent persons specially trained in the proper and safe operation of such equipment. In the case of materials used under Commission license, only persons actually licensed, or competent persons under direction and supervision of the licensee, shall perform such work.

(c)–(r) [Reserved]

NOTE: The requirements applicable to construction work under paragraphs (c) through (r) of this section are identical to those set forth at paragraphs (a) through (p) of § 1910.1096 of this chapter.

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