

**RULES  
OF  
TENNESSEE DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT  
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH**

**CHAPTER 0800-1-1  
OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR GENERAL INDUSTRY**

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**0800-1-1-.01 PURPOSE AND SCOPE.**

- (1) The Commissioner of Labor and Workforce Development has the responsibility to develop and promulgate regulations which adopt occupational safety and health standards. The Commissioner may adopt the federal standards relating to the same issue.
- (2) This chapter carries out the directive to the Commissioner of Labor and Workforce Development under T.C.A. §§50-3-201 and 50-3-202. It adopts occupational safety and health standards which are the federal standards relating to the same issue, and state standards required for effective enforcement of the Act that are of a general or a specific nature in providing occupational safety and health protection.

**Authority:** T.C.A. §§4-3-1411, 50-3-201, and 50-3-202. **Administrative History:** Original rule certified June 10, 1974. Amendment filed June 12, 1974; effective July 12, 1974. Amendment filed January 10, 1975; effective February 10, 1975. Amendment filed June 18, 1975; effective July 18, 1975. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repeal and new rule filed March 31, 1983; effective June 15, 1983. Amendment filed November 25, 1983; effective February 13, 1984. Repeal and new rule filed January 11, 2002; effective May 31, 2002.

**0800-1-1-.02 DEFINITIONS.** As used in this and subsequent chapters, unless the context clearly otherwise requires:

- (1) "Act" means Chapter 561 of the Public Acts of 1972, known as the Occupational Safety and Health Act of 1972 pursuant to section 1 thereof, as amended (T.C.A. Title 50, Chapter 3, §§ 50-3-101 through 50-3-919.)
- (2) "Administrator" means the chief administrative officer of the Division of Occupational Safety and Health of the Tennessee Department of Labor and Workforce Development, and includes any person appointed, designated or deputized to perform the duties or to exercise the powers assigned to the Administrator of the Division of Occupational Safety and Health under the Act.
- (3) "Commissioner of Labor and Workforce Development" or "Commissioner" means the chief executive officer of the Tennessee Department of Labor and Workforce Development. For the purposes of this chapter, it includes any person appointed, designated, or deputized to perform the duties or to exercise the powers assigned to the Commissioner of Labor and Workforce Development under the Act.
- (4) "Employee" means any person performing services for another under a contract of hire, including minors, whether lawfully or unlawfully employed, persons in executive positions, and shall include state, county, metropolitan and municipal government employees.

(Rule 0800-1-1-.02, continued)

- (5) "Employer" means a person engaged in a business who has one or more employees and includes state, county, metropolitan and municipal governments.
- (6) "Federal standard" means a standard adopted a by rule promulgated under section 6 of the Occupational Safety and Health Act of 1970, Public Law 91-596 (Title 29, United States Code § 655).
- (7) "OSHA" means the Occupational Safety and Health Act of 1970, as amended Public Law 91-596 (Title 29, United States Code § 650 et seq., or the Occupational Safety and Health Administration, United States Department of Labor, depending upon the context in which the acronym is used. As used in federal standards adopted by this chapter, it shall mean the same as federal standard as defined in paragraph (6) of this rule or one of the foregoing, depending upon context. It shall also, for the purposes of this chapter, be considered synonymous with the acronym "TOSHA" as defined in paragraph (10) of this rule.
- (8) "Person" means one or more individuals, partnerships, associations, corporations, business trusts, legal representatives or any organized group of persons.
- (9) "Standard" means an occupational safety and health standard promulgated by the Commissioner of Labor and Workforce Development which requires conditions or the adoption or the use of one or more practices, means, methods, operations or processes reasonably necessary or appropriate to provide safe and healthful employment and places of employment.
- (10) "TOSHA" means the Division of Occupational Safety and Health, Tennessee Department of Labor and Workforce Development, which is the agency responsible for the administration and enforcement of the Act and rules and regulations promulgated by the Commissioner of Labor and Workforce Development pursuant thereto.

**Authority:** T.C.A. §§4-3-1411, 50-3-103, and 50-3-201. **Administrative History:** Original rule filed January 10, 1975; effective February 9, 1975. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repeal and new rule filed March 31, 1983; effective June 15, 1983. Amendment filed November 25, 1983; effective February 13, 1984. Amendment filed March 27, 2001; effective July 30, 2001. Repeal and new rule filed January 11, 2002; effective May 31, 2002.

#### **0800-1-1-.03 PETITIONS FOR THE ISSUANCE, AMENDMENT, OR REPEAL OF A STANDARD.**

- (1) Any interested person may petition in writing the Commissioner of Labor and Workforce Development to promulgate, modify or revoke a standard. The petition should set forth the terms or the substance of the rule desired, the effects thereof if promulgated, and the reasons therefor.
- (2) Within a reasonable time after the receipt of a submission pursuant to paragraph (1) of this rule, the Commissioner shall inform the person submitting the petition in writing of his intended action. If the petition is denied, the Commissioner shall set forth the reasons therefor.

**Authority:** T.C.A. §§4-3-1411, 50-3-105, and 50-3-201. **Administrative History:** Original rule filed June 18, 1975; effective July 18, 1975. Amendment filed January 26, 1976; effective April 15, 1976. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repealed and new rule filed March 31, 1983; effective June 15, 1983. Amendment filed November 25, 1983; effective February 13, 1984. Repeal and new rule filed January 11, 2002; effective May 31, 2002.

**0800-1-1-.04 AMENDMENTS TO THIS CHAPTER.**

- (1) The Commissioner of Labor and Workforce Development may promulgate, modify, or revoke any occupational safety and health standard in this chapter in the manner provided in T.C.A. § 4-5-101 et seq., the Uniform Administrative Procedures Act.

**Authority:** T.C.A. §§4-3-1411 and 50-3-201. **Administrative History:** Original rule filed June 18, 1975; effective July 18, 1975. Amendment filed January 26, 1976; effective April 15, 1976. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repeal and new rule filed March 31, 1983; effective June 15, 1983. Amendment filed November 25, 1983; effective February 13, 1984. Repeal and new rule filed January 11, 2002; effective May 31, 2002.

**0800-1-1-.05 APPLICABILITY OF STANDARDS.**

- (1) Except as provided in paragraph (2) of this rule, the standards contained in this chapter shall apply with respect to employments performed in all workplaces in the State of Tennessee.
- (2) None of the standards in this chapter shall apply to working conditions of employees exempted from coverage under the Act. These are:
  - (a) Employees of the federal government, including its departments, agencies and instrumentalities;
  - (b) Employees whose safety and health are subject to protection under the Atomic Energy Act of 1954, as amended (42 USC §§ 2011-2296);
  - (c) Employees whose safety and health are subject to protection under the federal Coal Mine Health and Safety Act of 1969 (30 USC § 801 et seq.), the federal Metal and Nonmetallic Mine Safety Act (30 USC § 725) [repealed], or Tennessee Code Annotated, Title 59;
  - (d) Railroad employees whose safety and health are subject to protection under the federal Safety Appliances Act (45 USC § 1 et seq.) or the federal Railroad Safety Act of 1970 (45 USC §§ 431-441);
  - (e) Domestic workers;
  - (f) Employees covered by the Longshoremen's and Harbor Workers' Compensation Act, as amended (33 USC §§ 901-950); and
  - (g) Any employee engaged in agriculture who is employed on a farm, each of the employees of which is related to the employer as a spouse, child, parent, grandparent or grandchild.
- (3) Applicability of specific vs. general standards.
  - (a) If a particular standard is specifically applicable to a condition, practice, means, method, operation or process, it shall prevail over any different general standard which might otherwise be applicable to the same condition, practice, means, method, operation or process. For example, the standard 29 CFR 1910.217 as adopted by rules of this chapter prescribes guarding for mechanical power presses. Such a standard shall apply, and shall not be deemed modified or superseded by any different general standard whose provisions might otherwise be applicable, such as the

(Rule 0800-1-1-.05, continued)

standard 29 CFR 1910.212 as adopted by rules of this chapter which prescribes general requirements for all machines.

- (b) On the other hand, any standard shall apply according to its terms to any employment and place of employment in any industry, as standards 29 CFR 1910.261 through 29 CFR 1910.272 (Appendix C) as adopted by rules of this chapter or 29 CFR 1926 as adopted by rules in Chapter 0800-1-6. For example, the general standard regarding noise exposure, 29 CFR 1910.95 as adopted by rules of this chapter, applies to employments and places of employment in pulp, paper and paperboard mills covered by the standard 29 CFR 1910.261 as adopted by rules of this chapter.
- (4) In the event a standard protects on its face a class of persons larger than employees, the standard shall be applicable under the Act only to those employees and their employment and places of employment.
- (5) An employer who is in compliance with any standard in this chapter shall be deemed to be in compliance with the requirement of T.C.A. §50-3-105(1), but only to the extent of the condition, practice, means, method, operation or process covered by the standard.

**Authority:** T.C.A. §§4-3-1411, 50-3-105, and 50-3-201. **Administrative History:** Original rule filed September 14, 1976; effective October 14, 1976. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repeal and new rule filed March 31, 1983; effective June 15, 1983. Amendment filed November 25, 1983; effective February 13, 1984. Repeal and new rule filed January 11, 2002; effective May 31, 2002.

#### **0800-1-1-.06 ADOPTION AND CITATION OF FEDERAL STANDARDS.**

- (1) The federal occupational safety and health standards adopted by the Commissioner of Labor and Workforce Development in this chapter shall be cited using the designation in Title 29, Code of Federal Regulations, Part 1910, i.e., 29 CFR 1910.38, 29 CFR 1910.137(a)(1)(ii)(E), etc. Where adoption to the current Title 29, Code of Federal Regulations, Part 1910, is an exception, the citation shall be to 29 CFR 1910 as published in the Federal Register or to the appropriate rule in this chapter. See Rule 0800-1-1-.07 for exceptions.
- (2) The Commissioner of Labor and Workforce Development adopts the federal occupational safety and health standards codified in Title 29, Code of Federal Regulations, Part 1910, as of July 1, 2008 except as provided in Rule 0800-1-1-.07 of this chapter.

**Authority:** T.C.A. §§4-3-1411 and 50-3-201. **Administrative History:** Original rule filed January 15, 1977; effective February 13, 1977. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repeal and new rule filed March 31, 1983; effective June 15, 1983. Amendment filed August 13, 1999; effective December 29, 1999. Amendment filed November 30, 2000; effective March 30, 2001. Amendment filed March 27, 2001; effective July 30, 2001. Repeal and new rule filed January 11, 2002; effective May 31, 2002. Amendment filed September 13, 2002; effective January 28, 2003. Amendment filed November 25, 2002; effective March 28, 2003. Amendment filed May 14, 2003; effective September 26, 2003. Amendment filed November 13, 2003; effective March 29, 2004. Amendment filed April 21, 2004; effective August 27, 2004. Amendment filed September 7, 2004; effective January 28, 2005. Amendment filed February 16, 2005; effective June 28, 2005. Amendment filed September 12, 2005; effective January 27, 2006. Amendment filed April 26, 2006; effective August 28, 2006. Amendment filed November 16, 2006; effective date March 30, 2007. Amendment filed April 5, 2007; effective August 28, 2007. Amendment filed October 17, 2007; effective February 28, 2008. Amendment filed February 21, 2008; effective June 27, 2008.

**0800-1-1-.07 EXCEPTIONS TO ADOPTION OF FEDERAL STANDARDS IN 29 CFR PART 1910.**

- (1) The Commissioner of Labor and Workforce Development does not adopt the following federal occupational safety and health standards:
  - (a) 29 CFR 1910.1 Purpose and scope.
  - (b) 29 CFR 1910.2 Definitions.
  - (c) 29 CFR 1910.3 Petitions for the issuance, amendment, or repeal of a standard.
  - (d) 29 CFR 1910.4 Amendments to this part.
  - (e) 29 CFR 1910.15 Shipyard employment.
  - (f) 29 CFR 1910.16 Longshoring and marine terminals.
- (2) In lieu of the current federal occupational safety and health standards codified in Title 29, Code of Federal Regulations, Part 1910, Rule 0800-1-1-.06 of this chapter, or the absence thereof because of repeal or revocation, the Commissioner of Labor and Workforce Development adopts the standards limiting exposure to air contaminants as contained in subparagraph (b) of this rule. The information contained therein was compiled and adopted from the following federal occupational safety and health standards as published in the Federal Register in the volume and on the page(s) indicated.
  - (a) 29 CFR 1910.1000 at 54 FR 2920-2983 and the following corrections and amendments thereto:
    1. 29 CFR 1910.1000 at 54 FR 28054-28061.
    2. 29 CFR 1910.1000 at 54 FR 36767-36768.
    3. 29 CFR 1910.1000 at 54 FR 41244.
    4. 29 CFR 1910.1000 at 54 FR 47513.
    5. 29 CFR 1910.1000 at 54 FR 50372-50373.
    6. 29 CFR 1910.1000 at 55 FR 3724.
    7. 29 CFR 1910.1000 at 55 FR 12819.
    8. 29 CFR 1910.1000 at 55 FR 19259.
    9. 29 CFR 1910.1000 at 55 FR 46950.
    10. 29 CFR 1910.1000 at 57 FR 29204-29206.
    11. 29 CFR 1910.1000 at 57 FR 42388-42389.
  - (b) Subpart Z - Toxic and Hazardous Substances 29 CFR 1910.1000 - Air Contaminants as adopted by subparagraph (a) of this rule reads as follows: An employee's exposure to any substance listed in Table Z-1-A shall be limited in accordance with the following requirements:

(Rule 0800-1-1-.07, continued)

1. Limits for Air Contaminants Columns. An employee's exposure to any substance listed in Table Z-1-A shall not exceed the Time Weighted Average (TWA), Short Term Exposure Limit (STEL) and Ceiling Limit specified for that substance in Table Z-1-A.
  2. Skin Designation. To prevent or reduce skin absorption, an employee's skin exposure to substances listed in Table Z-1-A with an "X" in the Skin Designation column following the substance name shall be prevented or reduced to the extent necessary in the circumstances through the use of gloves, coveralls, goggles, or other appropriate personal protective equipment, engineering controls or work practices.
  3. Definitions. The following definitions are applicable to the limits for air contaminants columns of Table Z-1-A:
    - (i) Time weighted average (TWA) is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.
    - (ii) Short term exposure limit (STEL) is the employee's 15-minute time weighted average exposure which shall not be exceeded at any time during the work day unless another time limit is specified in a parenthetical notation below the limit. If another time period is specified, the time weighted average exposure over that time period shall not be exceeded at any time during the working day.
    - (iii) Ceiling is the employee's exposure which shall not be exceeded during any part of the work day. If instantaneous monitoring is not feasible, then the ceiling shall be assessed as a 15-minute time weighted average exposure which shall not be exceeded at any time over a working day.
  4. Additional Definition. The terms "substance", "air contaminant", and "material" are equivalent in meaning for 29 CFR 1910.1000.
- (c) Computation formulae. The computation formula which shall apply to employee exposure to more than one substance for which 8-hour time weighted averages are listed in Subpart Z of 29 CFR Part 1910 in order to determine whether an employee is exposed over the regulatory limit is as follows:
1. The cumulative exposure for an 8-hour work shift shall be computed as follows:
$$E = (CaTa + CbTb + \dots CnTn) \div 8$$

Where  
:

E is the equivalent exposure for the working shift.  
C is the concentration during any period of time T  
where the concentration remains constant.  
T is the duration in hours of the exposure at the  
concentration C.
  2. To illustrate the formula prescribed above, assume that Substance A has an 8-hour time weighted average limit of 100 ppm noted in Table Z-1-A. Assume that an employee is subject to the following exposure:

(Rule 0800-1-1-.07, continued)

Two hours exposure at 150 ppm  
Two hours exposure at 75 ppm  
Four hours exposure at 50 ppm

The value of E shall not exceed the 8-hour time weighted average specified in Subpart Z of 29 CFR Part 1910 for the material involved.

Substituting this information in the formula, we have:

$$2 \times 150 + 2 \times 75 + 4 \times 50 \div 8 = 81.25 \text{ ppm.}$$

Since 81.25 ppm is less than 100 ppm, the 8-hour time weighted average limit, the exposure is acceptable.

3. In case of a mixture of air contaminants, an employer shall compute the equivalent exposure as follows:  $E_m = (C_1 \div L_1) + (C_2 \div L_2) + \dots (C_n \div L_n)$

Where:

$E_m$  is the equivalent exposure for the mixture.  
C is the concentration of a particular contaminant.  
L is the exposure limit for that substance specified in Subpart Z of 29 CFR Part 1910.  
The value of  $E_m$  shall not exceed unity (1).

4. To illustrate the formula prescribed above, consider the following exposures:

| Substance | Actual concentration of 8 hour exposure (ppm) | 8 hr. TWA PEL (ppm) |
|-----------|-----------------------------------------------|---------------------|
| B         | 500                                           | 1000                |
| C         | 45                                            | 200                 |
| D         | 40                                            | 200                 |

Substituting in the formula, we have:  $E_m = 500 \div 1000 + 45 \div 200 + 40 \div 200$

$$E_m = 0.500 + 0.225 + 0.200$$

$$E_m = 0.925$$

Since  $E_m$  is less than unity (1), the exposure combination is within acceptable limits.

- (d) To achieve compliance with subparagraphs (b) and (c) of this rule, administrative or engineering controls must first be determined and implemented whenever feasible. When such controls are not feasible to achieve full compliance, protective equipment or any other protective measures shall be used to keep the exposure of employees to air contaminants within the limits prescribed herein. Any equipment and/or technical measures used for this purpose must be approved for each particular use by a competent industrial hygienist or other technically qualified person. Whenever respirators are used, their use shall comply with 29 CFR 1910.134.

- (e) Note: Abbreviations used in Table Z-1-A.

1. As determined from breathing-zone air samples:

- (i) ppm -Parts of vapor or gas per million parts of contaminated air by volume at 25 degrees C and 760 torr.

(Rule 0800-1-1-.07, continued)

- (ii) mg/m3 -Approximate milligrams of substance per cubic meter of air.
- (iii) STEL - Short Term Exposure Limit, duration is 15 minutes, unless otherwise noted.
2. CAS No. - Chemical Abstract Service Number, the CAS number is for information only. Enforcement is based on the substance name. For an entry covering more than one metal compound measured as the metal, the CAS number for the metal is given-not the CAS numbers for the individual compounds.

(3) TABLE Z - 1 - A - Limits For Air Contaminants.

| Substance                                      | CAS No.   | TWA |       | STEL |       | Ceiling |       | Skin designation |
|------------------------------------------------|-----------|-----|-------|------|-------|---------|-------|------------------|
|                                                |           | ppm | mg/m3 | ppm  | mg/m3 | ppm     | mg/m3 |                  |
| Acetaldehyde                                   | 75-07-0   | 100 | 180   | 150  | 270   | —       | —     | —                |
| Acetic acid                                    | 64-19-7   | 10  | 25    | —    | —     | —       | —     | —                |
| Acetic anhydride                               | 108-24-7  | —   | —     | —    | —     | 5       | 20    | —                |
| Acetone                                        | 67-64-1   | 750 | 1800  | 1000 | 2400  | —       | —     | —                |
| Acetonitrile                                   | 75-05-8   | 40  | 70    | 60   | 105   | —       | —     | —                |
| 2-Acetylaminofluorine; see 29 CFR 1910.1003    | 53-96-3   | —   | —     | —    | —     | —       | —     | —                |
| Acetylene dichloride; see 1,2-Dichloroethylene |           |     |       |      |       |         |       |                  |
| Acetylene tetrabromide                         | 79-27-6   | 1   | 14    | —    | —     | —       | —     | —                |
| Acetylsalicylic acid (Asprin)                  | 50-78-2   | —   | 5     | —    | —     | —       | —     | —                |
| Acrolein                                       | 107-02-8  | 0.1 | 0.25  | 0.3  | 0.8   | —       | —     | —                |
| Acrylamide                                     | 79-06-1   | —   | 0.03  | —    | —     | —       | —     | X                |
| Acrylic acid                                   | 79-10-7   | 10  | 30    | —    | —     | —       | —     | X                |
| Acrylonitrile; see 29 CFR 1910.1045            | 107-13-1  | —   | —     | —    | —     | —       | —     | —                |
| Aldrin                                         | 309-00-2  | —   | 0.25  | —    | —     | —       | —     | X                |
| Allyl alcohol                                  | 107-18-6  | 2   | 5     | 4    | 10    | —       | —     | X                |
| Allyl chloride                                 | 107-05-1  | 1   | 3     | 2    | 6     | —       | —     | —                |
| Allyd glycidl ether (AGE)                      | 106-92-3  | 5   | 22    | 10   | 44    | —       | —     | —                |
| Allyl propyl disulfide                         | 2179-59-1 | 2   | 12    | 3    | 18    | —       | —     | —                |
| alpha-Alumina                                  | 1344-28-1 | —   | —     | —    | —     | —       | —     | —                |
| Total dust                                     | —         | —   | 10    | —    | —     | —       | —     | —                |
| Respirable fraction                            | —         | —   | 5     | —    | —     | —       | —     | —                |
| Aluminum (As al)<br>Metal                      | 7429-90-5 |     |       |      |       |         |       |                  |
| Total dust                                     | —         | —   | 15    | —    | —     | —       | —     | —                |
| Respirable fraction                            | —         | —   | 5     | —    | —     | —       | —     | —                |
| Pyro powders                                   | —         | —   | 5     | —    | —     | —       | —     | —                |
| Welding fumes                                  | —         | —   | 5     | —    | —     | —       | —     | —                |
| Soluble salts                                  | —         | —   | 2     | —    | —     | —       | —     | —                |
| Alkyls                                         | —         | —   | 2     | —    | —     | —       | —     | —                |
| 4-Aminodiphenyl; see 29 CFR 1910.1003          | 92-67-1   |     |       |      |       |         |       |                  |
| 2-Aminoethanol; see Ethanolamine               |           |     |       |      |       |         |       |                  |
| 2-Aminopyridine                                | 504-29-0  | 0.5 | 2     | —    | —     | —       | —     | —                |
| Amitrole                                       | 61-82-5   | —   | 0.2   | —    | —     | —       | —     | —                |

(Rule 0800-1-1-.07, continued)

|                                                               |            |      |       |     |       |    |       |   |
|---------------------------------------------------------------|------------|------|-------|-----|-------|----|-------|---|
| Ammonia                                                       | 7664-41-7  | —    | —     | 35  | 27    | —  | —     | — |
| Ammonium chloride fume                                        | 12125-02-9 | —    | 10    | —   | 20    | —  | —     | — |
| Ammonium sulfamate                                            | 7773-06-0  |      |       |     |       |    |       |   |
| Total dust                                                    | —          | —    | 10    | —   | —     | —  | —     | — |
| Respirable fraction                                           | —          | —    | 5     | —   | —     | —  | —     | — |
| n-Amyl acetate                                                | 628-63-7   | 100  | 525   | —   | —     | —  | —     | — |
| Sec-Amyl acetate                                              | 626-38-0   | 125  | 650   | —   | —     | —  | —     | — |
| Aniline and homologs                                          | 62-53-3    | 2    | 8     | —   | —     | —  | —     | X |
| Anisidine (o-,p-isomers)                                      | 29191-52-4 | —    | 0.5   | —   | —     | —  | —     | X |
| Antimony and compounds (as Sb)                                | 7440-36-0  | —    | 0.5   | —   | —     | —  | —     | — |
| ANTU (alpha Naphthylthiourea)                                 | 86-88-4    | —    | 0.3   | —   | —     | —  | —     | — |
| Arsenic, organic compounds (as As)                            | 7440-38-2  | —    | 0.5   | —   | —     | —  | —     | — |
| Arsenic, inorganic compounds (as As); see 29 CFR 1910.1018    | 7440-38-2  |      |       |     |       |    |       |   |
| Arsine                                                        | 7784-42-1  | 0.05 | 0.2   | —   | —     | —  | —     | — |
| Asbestos; see 29 CFR 1910.1001 and 29 CFR 1926.1101           | Varies     |      |       |     |       |    |       |   |
| Atrazine                                                      | 1912-24-9  | —    | 5     | —   | —     | —  | —     | — |
| Azinphos-methyl                                               | 86-50-0    | —    | 0.2   | —   | —     | —  | —     | X |
| Barium, soluble compounds (as Ba)                             | 7440-39-3  | —    | 0.5   | —   | —     | —  | —     | — |
| Barium sulfate                                                | 7727-43-7  |      |       |     |       |    |       |   |
| Total dust                                                    | —          | —    | 10    | —   | —     | —  | —     | — |
| Respirable fraction                                           | —          | —    | 5     | —   | —     | —  | —     | — |
| Benomyl                                                       | 17804-35-2 |      |       |     |       |    |       |   |
| Total dust                                                    | —          | —    | 10    | —   | —     | —  | —     | — |
| Respirable fraction                                           | —          | —    | 5     | —   | —     | —  | —     | — |
| Benzene; see 29 CFR 1910.1028                                 | 71-43-2    |      |       |     |       |    |       |   |
| Industries excluded from 29 CFR 1910.1028 (STEL – 10 minutes) |            | 10   | —     | 25  | —     | 50 | —     | — |
| Benzidine; see 29 CFR 1910.1003                               | 92-87-5    |      |       |     |       |    |       |   |
| p-Benzoquinone; see Quinone                                   |            |      |       |     |       |    |       |   |
| Benzo(a)pyrene; see Coal tar pitch volatiles                  |            |      |       |     |       |    |       |   |
| Benzoyl peroxide                                              | 94-36-0    | —    | 5     | —   | —     | —  | —     | — |
| Benzyl chloride                                               | 100-44-7   | 1    | 5     | —   | —     | —  | —     | — |
| Beryllium and beryllium Compounds (as Be) (STEL – 30 minutes) | 7440-41-7  | —    | 0.002 | —   | 0.005 | —  | 0.025 | — |
| Biphenyl; see Diphenyl                                        |            |      |       |     |       |    |       |   |
| Bismuth telluride, Undoped                                    | 1304-82-1  |      |       |     |       |    |       |   |
| Total dust                                                    | —          | —    | 15    | —   | —     | —  | —     | — |
| Respirable fraction                                           | —          | —    | 5     | —   | —     | —  | —     | — |
| Bismuth telluride, Se-doped                                   | —          | —    | 5     | —   | —     | —  | —     | — |
| Borates, tetra, sodium salts                                  |            |      |       |     |       |    |       |   |
| Anhydrous                                                     | 1330-43-4  | —    | 10    | —   | —     | —  | —     | — |
| Decahydrate                                                   | 1303-96-4  | —    | 10    | —   | —     | —  | —     | — |
| Pentahydrate                                                  | 12179-04-3 | —    | 10    | —   | —     | —  | —     | — |
| Boron oxide                                                   | 1303-86-2  |      |       |     |       |    |       |   |
| Total dust                                                    | —          | —    | 10    | —   | —     | —  | —     | — |
| Boron tribromide                                              | 10294-33-4 | —    | —     | —   | —     | 1  | 10    | — |
| Boron trifluoride                                             | 7637-07-2  | —    | —     | —   | —     | 1  | 3     | — |
| Bromacil                                                      | 314-40-9   | 1    | 10    | —   | —     | —  | —     | — |
| Bromine                                                       | 7726-95-6  | 0.1  | 0.7   | 0.3 | 2     | —  | —     | — |
| Bromine pentafluoride                                         | 7789-30-2  | 0.1  | 0.7   | —   | —     | —  | —     | — |

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| Bromoform                                           | 75-25-2   | 0.5    | 5      | —      | —      | —    | —   | X |
| Butadiene (1,3-Butadiene) see 29 CFR 1910.1051      | 106-99-8  |        |        |        |        |      |     |   |
| Butane                                              | 106-97-8  | 800    | 1900   | —      | —      | —    | —   | — |
| Butanethiol; see Butyl mercaptan                    |           |        |        |        |        |      |     |   |
| 2-Butanone (Methyl ethyl ketone)                    | 78-93-3   | 200    | 590    | 300    | 885    | —    | —   | — |
| 2-Butoxyethanol                                     | 111-76-2  | 25     | 120    | —      | —      | —    | —   | X |
| n-butyl-acetate                                     | 123-86-4  | 150    | 710    | 200    | 950    | —    | —   | — |
| Sec-Butyl acetate                                   | 105-46-4  | 200    | 950    | —      | —      | —    | —   | — |
| Tert-Butyl acetate                                  | 540-88-5  | 200    | 950    | —      | —      | —    | —   | — |
| Butyl acrylate                                      | 141-32-2  | 10     | 55     | —      | —      | —    | —   | — |
| n-Butyl alcohol                                     | 71-36-3   | —      | —      | —      | —      | 50   | 150 | X |
| Sec-Butyl alcohol                                   | 78-92-2   | 100    | 305    | —      | —      | —    | —   | — |
| Tert-Butyl alcohol                                  | 75-65-0   | 100    | 300    | 150    | 450    | —    | —   | — |
| Butylamine                                          | 109-73-9  | —      | —      | —      | —      | 5    | 15  | X |
| Tert-Butyl chromate (as CrO <sub>3</sub> )          | 1189-85-1 | —      | —      | —      | —      | —    | 0.1 | X |
| n-Butyl glycidyl ether (BGE)                        | 2426-08-6 | 25     | 135    | —      | —      | —    | —   | — |
| n-Butyl lactate                                     | 138-22-7  | 5      | 25     | —      | —      | —    | —   | — |
| Butyl mercaptan                                     | 109-79-5  | 0.5    | 1.5    | —      | —      | —    | —   | — |
| o-sec-Butylphenol                                   | 89-72-5   | 5      | 30     | —      | —      | —    | —   | X |
| p-tert-Butyltoluene                                 | 98-51-1   | 10     | 60     | 20     | 120    | —    | —   | — |
| Cadmium fume and dust (as Cd); see 29 CFR 1910.1027 | 7440-43-9 |        |        |        |        |      |     |   |
| Calcium carbonate                                   | 1317-65-3 |        |        |        |        |      |     |   |
| Total dust                                          | —         | —      | 15     | —      | —      | —    | —   | — |
| Respirable fraction                                 | —         | —      | 5      | —      | —      | —    | —   | — |
| Calcium cyanamide                                   | 156-62-7  | —      | 0.5    | —      | —      | —    | —   | — |
| Calcium hydroxide                                   | 1305-62-0 |        |        | —      | —      | —    | —   | — |
| Total dust                                          | —         | —      | 15     | —      | —      | —    | —   | — |
| Respirable fraction                                 | —         | —      | 5      | —      | —      | —    | —   | — |
| Calcium oxide                                       | 1305-78-8 |        | 5      | —      | —      | —    | —   | — |
| Calcium silicate                                    | 1344-95-2 |        |        |        |        |      |     |   |
| Total dust                                          | —         | —      | 15     | —      | —      | —    | —   | — |
| Respirable fraction                                 | —         | —      | 5      | —      | —      | —    | —   | — |
| Calcium sulfate                                     | 7778-18-9 |        |        |        |        |      |     |   |
| Total dust                                          | —         | —      | 15     | —      | —      | —    | —   | — |
| Respirable fraction                                 | —         | —      | 5      | —      | —      | —    | —   | — |
| Camphor, synthetic                                  | 76-22-2   | —      | 2      | —      | —      | —    | —   | — |
| Caprolactam                                         | 105-60-2  |        |        |        |        |      |     |   |
| Dust                                                | —         | —      | 1      | —      | 3      | —    | —   | — |
| Vapor                                               | —         | 5      | 20     | 10     | 40     | —    | —   | — |
| Captafol (Difolatan®)                               | 2425-06-1 | —      | 0.1    | —      | —      | —    | —   | — |
| Captan                                              | 133-06-2  | —      | 5      | —      | —      | —    | —   | — |
| Carbaryl (Sevin®)                                   | 63-25-2   | —      | 5      | —      | —      | —    | —   | — |
| Carbofluran (Furadan®)                              | 1563-66-2 | —      | 0.1    | —      | —      | —    | —   | — |
| Carbon black                                        | 1333-86-4 | —      | 3.5    | —      | —      | —    | —   | — |
| Carbon dioxide                                      | 124-38-9  | 10,000 | 18,000 | 30,000 | 54,000 | —    | —   | — |
| Carbon disulfide                                    | 75-15-0   | 4      | 12     | 12     | 36     | —    | —   | X |
| Carbon monoxide (STEL – 5 minutes)                  | 630-08-0  | 35     | 40     | 200    | 229    | 1500 | —   | — |
| Carbon tetrabromide                                 | 558-13-4  | 0.1    | 1.4    | 0.3    | 4      | —    | —   | — |
| Carbon tetrachloride                                | 56-23-5   | 2      | 12.6   | —      | —      | —    | —   | — |
| Carbonyl fluoride                                   | 353-50-4  | 2      | 5      | 5      | 15     | —    | —   | — |

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| Catechol (Pyrocatechol)                           | 120-80-9             | 5    | 20   | —   | —   | —    | —   | X |
| Cellulose                                         | 9004-34-6            |      |      |     |     |      |     |   |
| Total Dust                                        | —                    | —    | 15   | —   | —   | —    | —   | — |
| Respirable fraction                               | —                    | —    | 5    | —   | —   | —    | —   | — |
| Cesium hydroxide                                  | 21351-79-1           | —    | 2    | —   | —   | —    | —   | — |
| Chlordane                                         | 57-74-9              | —    | 0.5  | —   | —   | —    | —   | X |
| Chlorinated camphene                              | 8001-35-2            | —    | 0.5  | —   | 1   | —    | —   | X |
| Chlorinated diphenyl oxide                        | 55720-99-5           | —    | 0.5  | —   | —   | —    | —   | — |
| Chlorine                                          | 7782-50-5            | 0.5  | 1.5  | 1   | 3   | —    | —   | — |
| Chlorine dioxide                                  | 10049-04-4           | 0.1  | 0.3  | 0.3 | 0.9 | —    | —   | — |
| Chlorine trifluoride                              | 7790-91-2            | —    | —    | —   | —   | 0.1  | 0.4 | — |
| Chloroacetaldehyde                                | 107-20-0             | —    | —    | —   | —   | 1    | 3   | — |
| a-Chloroacetophenone (Phenacyl chloride)          | 532-27-4             | 0.05 | 0.3  | —   | —   | —    | —   | — |
| Chloroacetyl chloride                             | 79-04-9              | 0.05 | 0.2  | —   | —   | —    | —   | — |
| Chlorobenzene                                     | 108-90-7             | 75   | 350  | —   | —   | —    | —   | — |
| o-Chlorobenzylidene malononitrile                 | 2698-41-1            | —    | —    | —   | —   | 0.05 | 0.4 | X |
| Chlorobromomethane                                | 74-97-5              | 200  | 1050 | —   | —   | —    | —   | — |
| 2-Chloro-1,3-butadiene; see b-Chloroprene         |                      |      |      |     |     |      |     |   |
| Chlorodifluoromethane                             | 75-45-6              | 1000 | 3500 | —   | —   | —    | —   | — |
| Chlorodiphenyl (42% Chlorine) (PCB)               | 53469-21-9           | —    | 1    | —   | —   | —    | —   | X |
| Chlorodiphenyl (54% Chlorine) (PCB)               | 11097-69-1           | —    | 0.5  | —   | —   | —    | —   | X |
| 1-Chloro-2,3-epoxypropane; see Epichlorohydrin    |                      |      |      |     |     |      |     |   |
| 2-Chloroethanol; see Ethylene chlorohydrin        |                      |      |      |     |     |      |     |   |
| Chloroethylene; see Vinyl chloride                |                      |      |      |     |     |      |     |   |
| Chloroform (Trichloromethane)                     | 67-66-3              | 2    | 9.78 | —   | —   | —    | —   | — |
| Bis(Chloromethyl) ether see 29 CFR 1910.1003      | 542-88-1             |      |      |     |     |      |     |   |
| Chloromethyl methyl ether; see 29 CFR 1910.1003   | 107-30-2             |      |      |     |     |      |     |   |
| 1-Chloro-1-nitropropane                           | 600-25-9             | 2    | 10   | —   | —   | —    | —   | — |
| Chloropentafluoroethane                           | 76-15-3              | 1000 | 6320 | —   | —   | —    | —   | — |
| Chloropicrin                                      | 76-06-2              | 0.1  | 0.7  | —   | —   | —    | —   | — |
| Beta-Chloroprene                                  | 126-99-8             | 10   | 35   | —   | —   | —    | —   | X |
| o-Chlorostyrene                                   | 2039-87-4            | 50   | 285  | 75  | 428 | —    | —   | — |
| o-Chlorotoluene                                   | 95-49-8              | 50   | 250  | —   | —   | —    | —   | — |
| 2-Chloro-6-trichloro-methylpyridine               | 1929-82-4            |      |      |     |     |      |     |   |
| Total dust                                        | —                    | —    | 15   | —   | —   | —    | —   | — |
| Respirable fraction                               | —                    | —    | 5    | —   | —   | —    | —   | — |
| Chlorpyrifos                                      | 2921-88-2            | —    | 0.2  | —   | —   | —    | —   | X |
| Chromic acid and chromates (as CrO <sub>3</sub> ) | Varies with compound | —    | —    | —   | —   | —    | 0.1 | — |
| Chromium, sol chromic, chromous salts (as Cr)     | 7440-47-3            | —    | 0.5  | —   | —   | —    | —   | — |
| Chromium, metal and insoluble Salts               | 7440-47-3            | —    | 1    | —   | —   | —    | —   | — |
| Chrysene; see Coal tar pitch volatiles            |                      |      |      |     |     |      |     |   |

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| Clopidol                                                                                                                                                                                                                                                                                                                                                               | 2971-90-6               |      |      |      |     |     |     |   |
| Total dust                                                                                                                                                                                                                                                                                                                                                             | —                       | —    | 15   | —    | —   | —   | —   | — |
| Respirable fraction                                                                                                                                                                                                                                                                                                                                                    | —                       | —    | 5    | —    | —   | —   | —   | — |
| Coal dust (less than 5% SiO <sub>2</sub> )<br>Respirable fraction                                                                                                                                                                                                                                                                                                      | —                       | —    | 0.2  | —    | —   | —   | —   | — |
| Coal dust (greater than or equal to<br>5% SiO <sub>2</sub> ), Respirable quartz<br>fraction                                                                                                                                                                                                                                                                            | —                       | —    | 0.1  | —    | —   | —   | —   | — |
| Coal tar pitch volatiles (benzene<br>soluble fraction), anthracene, BaP,<br>phenanthrene, acidine, chrysene,<br>pyrene                                                                                                                                                                                                                                                 | 65966-93-2              | —    | 0.2  | —    | —   | —   | —   | — |
| Cobalt metal, dust, and fume (as<br>Co)                                                                                                                                                                                                                                                                                                                                | 7440-48-4               | —    | 0.05 | —    | —   | —   | —   | — |
| Cobalt carbonyl (as Co)                                                                                                                                                                                                                                                                                                                                                | 10210-68-1              | —    | 0.1  | —    | —   | —   | —   | — |
| Cobalt hydrocarbonyl (as Co)                                                                                                                                                                                                                                                                                                                                           | 16842-03-8              | —    | 0.1  | —    | —   | —   | —   | — |
| Coke oven emissions; see 29 CFR<br>1910.1029                                                                                                                                                                                                                                                                                                                           | —                       |      |      |      |     |     |     |   |
| Copper                                                                                                                                                                                                                                                                                                                                                                 | 7440-50-8               | —    | —    | —    | —   | —   | —   | — |
| Fume (as Cu)                                                                                                                                                                                                                                                                                                                                                           | —                       | —    | 0.1  | —    | —   | —   | —   | — |
| Dusts and mists (as Cu)                                                                                                                                                                                                                                                                                                                                                | —                       | —    | 1    | —    | —   | —   | —   | — |
| Cotton dust (raw)                                                                                                                                                                                                                                                                                                                                                      | —                       | —    | 1    | —    | —   | —   | —   | — |
| This 8-hour TWA applies to respirable dust as measured by a vertical elutriator cotton dust sampler or equivalent instrument. The time-weighted average applies to the cotton waste processing operations of waste recycling (sorting, blending, cleaning and willowing) and garnetting. See also 29 CFR 1910.1043 for cotton dust limits applicable to other sectors. |                         |      |      |      |     |     |     |   |
| Crag herbicide (Sesone)                                                                                                                                                                                                                                                                                                                                                | 136-78-7                | —    | —    | —    | —   | —   | —   | — |
| Total dust                                                                                                                                                                                                                                                                                                                                                             | —                       | —    | 10   | —    | —   | —   | —   | — |
| Respirable fraction                                                                                                                                                                                                                                                                                                                                                    | —                       | —    | 5    | —    | —   | —   | —   | — |
| Cresol, all isomers                                                                                                                                                                                                                                                                                                                                                    | 1319-77-3               | 5    | 22   | —    | —   | —   | —   | X |
| Crotonaldehyde                                                                                                                                                                                                                                                                                                                                                         | 123-73-9;<br>4170-30-3  | 2    | 6    | —    | —   | —   | —   | — |
| Crufomate                                                                                                                                                                                                                                                                                                                                                              | 299-86-5                | —    | 5    | —    | —   | —   | —   | — |
| Cumene                                                                                                                                                                                                                                                                                                                                                                 | 98-82-8                 | 50   | 245  | —    | —   | —   | —   | X |
| Cyanamide                                                                                                                                                                                                                                                                                                                                                              | 420-04-2                | —    | 2    | —    | —   | —   | —   | — |
| Cyanides (as CN)                                                                                                                                                                                                                                                                                                                                                       | Varies with<br>compound | —    | 5    | —    | —   | —   | —   | — |
| Cyanogen                                                                                                                                                                                                                                                                                                                                                               | 460-19-5                | 10   | 20   | —    | —   | —   | —   | — |
| Cyanogen chloride                                                                                                                                                                                                                                                                                                                                                      | 506-77-4                | —    | —    | —    | —   | 0.3 | 0.6 | — |
| Cyclohexane                                                                                                                                                                                                                                                                                                                                                            | 110-82-7                | 300  | 1050 | —    | —   | —   | —   | — |
| Cyclohexanol                                                                                                                                                                                                                                                                                                                                                           | 108-93-0                | 50   | 200  | —    | —   | —   | —   | X |
| Cyclohexanone                                                                                                                                                                                                                                                                                                                                                          | 108-94-1                | 25   | 100  | —    | —   | —   | —   | X |
| Cyclohexene                                                                                                                                                                                                                                                                                                                                                            | 110-83-8                | 300  | 1015 | —    | —   | —   | —   | — |
| Cyclohexylamine                                                                                                                                                                                                                                                                                                                                                        | 108-91-8                | 10   | 40   | —    | —   | —   | —   | — |
| Cyclonite                                                                                                                                                                                                                                                                                                                                                              | 121-82-4                | —    | 1.5  | —    | —   | —   | —   | X |
| Cyclopentadiene                                                                                                                                                                                                                                                                                                                                                        | 542-92-7                | 75   | 200  | —    | —   | —   | —   | — |
| Cyclopentane                                                                                                                                                                                                                                                                                                                                                           | 287-92-3                | 600  | 1720 | —    | —   | —   | —   | — |
| Cyhexatin                                                                                                                                                                                                                                                                                                                                                              | 13121-70-5              | —    | 5    | —    | —   | —   | —   | — |
| 2,4-D (Dichlorophenoxyacetic acid)                                                                                                                                                                                                                                                                                                                                     | 94-75-7                 | —    | 10   | —    | —   | —   | —   | — |
| Decaborane                                                                                                                                                                                                                                                                                                                                                             | 17702-41-9              | 0.05 | 0.3  | 0.15 | 0.9 | —   | —   | X |
| Demeton (Systox®)                                                                                                                                                                                                                                                                                                                                                      | 8065-48-3               | —    | 0.1  | —    | —   | —   | —   | X |
| Dichlorodiphenyltrichloroethane<br>(DDT)                                                                                                                                                                                                                                                                                                                               | 50-29-3                 | —    | 1    | —    | —   | —   | —   | X |

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| Dichlorvos (DDVP)                                  | 62-73-7    | —    | 1    | —   | —   | —   | —   | X |
| Diacetone alcohol (4-Hydroxy-4-methyl-2-pentanone) | 123-42-2   | 50   | 240  | —   | —   | —   | —   | — |
| 1,2-Diaminoethane; see Ethylenediamine             |            |      |      |     |     |     |     |   |
| Diazinon                                           | 333-41-5   | —    | 0.1  | —   | —   | —   | —   | X |
| Diazomethane                                       | 334-88-3   | 0.2  | 0.4  | —   | —   | —   | —   | — |
| Diborane                                           | 19287-45-7 | 0.1  | 0.1  | —   | —   | —   | —   | — |
| 1,2-Dibromo-3-chloropropane; see 29 CFR 1910.1044  | 96-12-8    |      |      |     |     |     |     |   |
| 2-N-Dibutylaminoethanol                            | 102-81-8   | 2    | 14   | —   | —   | —   | —   | — |
| Dibutyl phosphate                                  | 107-66-4   | 1    | 5    | 2   | 10  | —   | —   | — |
| Dibutyl phthalate                                  | 84-74-2    | —    | 5    | —   | —   | —   | —   | — |
| Dichloroacetylene                                  | 7572-29-4  | —    | —    | —   | —   | 0.1 | 0.4 | — |
| o-Dichlorobenzene                                  | 95-50-1    | —    | —    | —   | —   | 50  | 300 | — |
| p-Dichlorobenzene                                  | 106-46-7   | 75   | 450  | 110 | 675 | —   | —   | — |
| 3,3'-Dichlorobenzidine see 29 CFR 1910.1003        | 91-94-1    |      |      |     |     |     |     |   |
| Dichlorodifluoromethane                            | 75-71-8    | 1000 | 4950 | —   | —   | —   | —   | — |
| 1,3-Dichloro-5,5-dimethyl hydantion                | 118-52-5   | —    | 0.2  | —   | 0.4 | —   | —   | — |
| 1,1-Dichloroethane                                 | 75-34-3    | 100  | 400  | —   | —   | —   | —   | — |
| 1,2-Dichloroethylene                               | 540-59-0   | 200  | 790  | —   | —   | —   | —   | — |
| Dichloroethyl ether                                | 111-44-4   | 5    | 30   | 10  | 60  | —   | —   | X |
| Dichloromethane; see Methylene chloride            |            |      |      |     |     |     |     |   |
| Dichloromonofluoro-methane                         | 75-43-4    | 10   | 40   | —   | —   | —   | —   | — |
| 1,1-Dichloro-1-nitroethane                         | 594-72-9   | 2    | 10   | —   | —   | —   | —   | — |
| 1,2-Dichloropropane; see Propylenedichloride       |            |      |      |     |     |     |     |   |
| 1,3-Dichloropropene                                | 542-75-8   | 1    | 5    | —   | —   | —   | —   | X |
| 2,2-Dichloropropionic acid                         | 75-99-0    | 1    | 6    | —   | —   | —   | —   | — |
| Dichlorotetrafluoroethane                          | 76-14-2    | 1000 | 7000 | —   | —   | —   | —   | — |
| Dicrotophos                                        | 141-66-2   | —    | 0.25 | —   | —   | —   | —   | X |
| Dicyclopentadiene                                  | 77-73-6    | 5    | 30   | —   | —   | —   | —   | — |
| Dicyclopentadienyl iron                            | 102-54-5   | —    | —    | —   | —   | —   | —   | — |
| Total dust                                         | —          | —    | 10   | —   | —   | —   | —   | — |
| Respirable fraction                                | —          | —    | 5    | —   | —   | —   | —   | — |
| Dieldrin                                           | 60-57-1    | —    | 0.25 | —   | —   | —   | —   | X |
| Diethanolamine                                     | 111-42-2   | 3    | 15   | —   | —   | —   | —   | — |
| Diethylamine                                       | 109-89-7   | 10   | 30   | 25  | 75  | —   | —   | — |
| 2-Diethylaminoethanol                              | 100-37-8   | 10   | 50   | —   | —   | —   | —   | X |
| Diethylene triamine                                | 111-40-0   | 1    | 4    | —   | —   | —   | —   | — |
| Diethyl ether, see Ethyl ether                     |            |      |      |     |     |     |     |   |
| Diethyl ketone                                     | 96-22-0    | 200  | 705  | —   | —   | —   | —   | — |
| Diethyl phthalate                                  | 84-66-2    | —    | 5    | —   | —   | —   | —   | — |
| Difluorodibromomethane                             | 75-61-6    | 100  | 860  | —   | —   | —   | —   | — |
| Diglycidyl ether (DGE)                             | 2238-07-5  | 0.1  | 0.5  | —   | —   | —   | —   | — |
| Dihydroxybenzene; see Hydroquinone                 |            |      |      |     |     |     |     |   |
| Diisobutyl ketone                                  | 108-83-8   | 25   | 150  | —   | —   | —   | —   | — |
| Diisopropylamine                                   | 108-18-9   | 5    | 20   | —   | —   | —   | —   | X |
| 4-Dimethylaminoazo-benzene; see 29 CFR 1910.1003   | 60-11-7    | —    | —    | —   | —   | —   | —   | — |

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| Dimethoxymethane; see Methytal                                   |            |     |     |     |     |   |   |   |
| Dimethyl acetamide                                               | 127-19-5   | 10  | 35  | —   | —   | — | — | X |
| Dimethylamine                                                    | 124-40-3   | 10  | 18  | —   | —   | — | — | — |
| Dimethylaminobenzene; see Xylidine                               |            |     |     |     |     |   |   |   |
| Dimethylaniline (N,N-Dimethyl-aniline)                           | 121-69-7   | 5   | 25  | 10  | 50  | — | — | X |
| Dimethylbenzene; see Xylene                                      |            |     |     |     |     |   |   |   |
| Dimethyl-1,2-dibromo-2,2-dichloroethyl phosphate                 | 300-76-5   | —   | 3   | —   | —   | — | — | X |
| Dimethylformamide                                                | 68-12-2    | 10  | 30  | —   | —   | — | — | X |
| 2,6-Dimethyl-4-hepta-none; see Diisobutyl ketone                 |            |     |     |     |     |   |   |   |
| 1,1-Dimethylhydrazine                                            | 57-14-7    | 0.5 | 1   | —   | —   | — | — | X |
| Dimethylphthalate                                                | 131-11-3   | —   | 5   | —   | —   | — | — | — |
| Dimethyl sulfate                                                 | 77-78-1    | 0.1 | 0.5 | —   | —   | — | — | X |
| Dinitolmide (3,5-Dinitro-o- toluamide)                           | 148-01-6   | —   | 5   | —   | —   | — | — | — |
| Dinitrobenzene (all isomers)                                     |            | —   | 1   | —   | —   | — | — | X |
| (alpha-)                                                         | 528-29-0   |     |     |     |     |   |   |   |
| (meta-)                                                          | 99-65-0    |     |     |     |     |   |   |   |
| (para-)                                                          | 100-25-4   |     |     |     |     |   |   |   |
| Dinitro-o-cresol                                                 | 534-52-1   | —   | 0.2 | —   | —   | — | — | X |
| Dinitrotoluene                                                   | 25321-14-6 | —   | 1.5 | —   | —   | — | — | X |
| Dioxane (Diethylene dioxide)                                     | 123-91-1   | 25  | 90  | —   | —   | — | — | X |
| Dioxathion (Delnav)                                              | 78-34-2    | —   | 0.2 | —   | —   | — | — | X |
| Diphenyl (Biphenyl)                                              | 92-52-4    | 0.2 | 1   | —   | —   | — | — | — |
| Diphenylamine                                                    | 122-39-4   | —   | 10  | —   | —   | — | — | — |
| Diphenylmethane diisocyanate; see Methylene bisphenyl isocyanate |            |     |     |     |     |   |   |   |
| Dipropylene glycol methyl ether                                  | 34590-94-8 | 100 | 600 | 150 | 900 | — | — | X |
| Diprophy ketone                                                  | 123-19-3   | 50  | 235 | —   | —   | — | — | — |
| Diquat                                                           | 85-00-7    | —   | 0.5 | —   | —   | — | — | — |
| Di-sec octyl phthalate (Di-2-ethylhexyl-phthalate)               | 117-81-7   | —   | 5   | —   | 10  | — | — | — |
| Disulfiram                                                       | 97-77-8    | —   | 2   | —   | —   | — | — | — |
| Disulfoton                                                       | 298-04-4   | —   | 0.1 | —   | —   | — | — | X |
| 2-6Di-tert-butyl-p-cresol                                        | 128-37-0   | —   | 10  | —   | —   | — | — | — |
| Diuron                                                           | 330-54-1   | —   | 10  | —   | —   | — | — | — |
| Divinyl benzene                                                  | 1321-74-0  | 10  | 50  | —   | —   | — | — | — |
| Emery                                                            | 12415-34-8 | —   | —   | —   | —   | — | — | — |
| Total dust                                                       | —          | —   | 10  | —   | —   | — | — | — |
| Respirable fraction                                              | —          | —   | 5   | —   | —   | — | — | — |
| Endosulfan                                                       | 115-29-7   | —   | 0.1 | —   | —   | — | — | X |
| Endrin                                                           | 72-20-8    | —   | 0.1 | —   | —   | — | — | X |
| Epichlorohdrin                                                   | 106-89-8   | 2   | 8   | —   | —   | — | — | X |
| EPN                                                              | 2104-64-5  | —   | 0.5 | —   | —   | — | — | X |
| 1,2-epoxypropane; see Propylene oxide                            |            |     |     |     |     |   |   |   |
| 2-3-Epoxy-1-propanol; see Glydicol                               |            |     |     |     |     |   |   |   |
| Ethanethiol; see Ethy mercaptan                                  |            |     |     |     |     |   |   |   |
| Ethanolamine                                                     | 141-43-5   | 3   | 8   | 6   | 15  | — | — | — |
| Ethion                                                           | 563-12-2   | —   | 0.4 | —   | —   | — | — | X |
| 2-Ethoxyethanol                                                  | 110-80-5   | 200 | 740 | —   | —   | — | — | X |

(Rule 0800-1-1-.07, continued)

|                                                               |                      |      |      |     |      |      |      |   |
|---------------------------------------------------------------|----------------------|------|------|-----|------|------|------|---|
| 2-Ethoxyethyl acetate (Cellosolve acetate)                    | 111-15-9             | 100  | 540  | —   | —    | —    | —    | X |
| Ethyl acetate                                                 | 141-78-6             | 400  | 1400 | —   | —    | —    | —    | — |
| Ethyl acrylate                                                | 140-88-5             | 5    | 20   | 25  | 100  | —    | —    | X |
| Ethyl alcohol (Ethonal)                                       | 64-17-5              | 1000 | 1900 | —   | —    | —    | —    | — |
| Ethylamine                                                    | 75-04-7              | 10   | 18   | —   | —    | —    | —    | — |
| Ethyl amyl ketone (5-Methyl-3-heptanone)                      | 541-85-5             | 25   | 130  | —   | —    | —    | —    | — |
| Ethyl benzene                                                 | 100-41-4             | 100  | 435  | 125 | 545  | —    | —    | — |
| Ethyl bromide                                                 | 74-96-4              | 200  | 890  | 250 | 1110 | —    | —    | — |
| Ethyl butyl ketone (3-Heptanone)                              | 106-35-4             | 50   | 230  | —   | —    | —    | —    | — |
| Ethyl chloride                                                | 75-00-3              | 1000 | 2600 | —   | —    | —    | —    | — |
| Ethyl ether                                                   | 60-29-7              | 400  | 1200 | 500 | 1500 | —    | —    | — |
| Ethyl formate                                                 | 109-94-4             | 100  | 300  | —   | —    | —    | —    | — |
| Ethyl mercaptan                                               | 75-08-1              | 0.5  | 1    | —   | —    | —    | —    | — |
| Ethyl silicate                                                | 78-10-4              | 10   | 85   | —   | —    | —    | —    | — |
| Ethylene chlorohydrin                                         | 107-07-3             | —    | —    | —   | —    | 1    | 3    | X |
| Ethylenediamine                                               | 107-15-3             | 10   | 25   | —   | —    | —    | —    | — |
| Ethylene dibromide (STEL – 5 minutes)                         | 106-93-4             | 20   | —    | —   | 30   | —    | 50   | — |
| Ethylene dichloride                                           | 107-06-2             | 1    | 4    | 2   | 8    | —    | —    | — |
| Ethylene glycol                                               | 107-21-1             | —    | —    | —   | —    | 50   | 125  | — |
| Ethylene glycol dinitrate                                     | 628-96-6             | —    | —    | —   | 0.1  | —    | —    | X |
| Ethylene glycol methyl acetate; see Methyl cellosolve acetate |                      |      |      |     |      |      |      |   |
| Ethyleneimine; see 29 CFR 1910.1003                           | 151-56-4             |      |      |     |      |      |      |   |
| Ethylene oxide; see 29 CFR 1910.1047                          | 75-21-8              |      |      |     |      |      |      |   |
| Ethylidene chloride; see 1,1-Dichloroethane                   |                      |      |      |     |      |      |      |   |
| Ethylidene norbornene                                         | 16219-75-3           | —    | —    | —   | —    | 5    | 25   | — |
| Nethylmorpholine                                              | 100-74-3             | 5    | 23   | —   | —    | —    | —    | X |
| Fenamiphos                                                    | 22224-92-6           | —    | 0.1  | —   | —    | —    | —    | X |
| Fensulfothion (Dasanit)                                       | 115-90-2             | —    | 0.1  | —   | —    | —    | —    | — |
| Fenthion                                                      | 55-38-9              | —    | 0.2  | —   | —    | —    | —    | X |
| Ferbam                                                        | 14484-64-1           | —    | —    | —   | —    | —    | —    | — |
| Total dust                                                    | —                    | —    | 10   | —   | —    | —    | —    | — |
| Ferrovanadium dust                                            | 12604-58-9           | —    | 1    | —   | 3    | —    | —    | — |
| Fluorides (as F)                                              | Varies with compound | —    | 2.5  | —   | —    | —    | —    | — |
| Fluorine                                                      | 7782-41-4            | 01.  | 0.2  | —   | —    | —    | —    | — |
| Fluorotrichloromethane (Trichlorofluoromethane)               | 75-69-4              | —    | —    | —   | —    | 1000 | 5600 | — |
| Fonofos                                                       | 944-22-9             | —    | 0.1  | —   | —    | —    | —    | X |
| Formaldehyde; see 29 CFR 1910.1048                            |                      |      |      |     |      |      |      |   |
| Formamide                                                     | 75-12-7              | 20   | 30   | 30  | 45   | —    | —    | — |
| Formic acid                                                   | 64-18-6              | 5    | 9    | —   | —    | —    | —    | — |
| Furfural                                                      | 98-01-1              | 2    | 8    | —   | —    | —    | —    | X |
| Furfuryl alcohol                                              | 98-00-0              | 10   | 40   | 15  | 60   | —    | —    | X |
| Gasoline                                                      | 8006-61-9            | 300  | 900  | 500 | 1500 | —    | —    | — |
| Bermanium tetrahydride                                        | 7782-65-2            | 0.2  | 0.6  | —   | —    | —    | —    | — |

(Rule 0800-1-1-.07, continued)

|                                            |                      |      |      |      |      |     |     |   |
|--------------------------------------------|----------------------|------|------|------|------|-----|-----|---|
| Glutaraldehyde                             | 111-30-8             | —    | —    | —    | —    | 0.2 | 0.8 | — |
| Glycerin (mist)                            | 56-81-5              | —    | —    | —    | —    | —   | —   | — |
| Total dust                                 | —                    | —    | 10   | —    | —    | —   | —   | — |
| Respirable fraction                        | —                    | —    | 5    | —    | —    | —   | —   | — |
| Glycidol                                   | 556-52-5             | 25   | 75   | —    | —    | —   | —   | — |
| Glycol monoethyl ether see 2-Ethoxyethanol |                      |      |      |      |      |     |     |   |
| Grain dust (oat, wheat, barley)            | —                    | —    | 10   | —    | —    | —   | —   | — |
| Graphite, natural respirable dust          | 7782-42-5            | —    | 2.5  | —    | —    | —   | —   | — |
| Graphite, synthetic                        | —                    | —    | —    | —    | —    | —   | —   | — |
| Total dust                                 | —                    | —    | 10   | —    | —    | —   | —   | — |
| Respirable fraction                        | —                    | —    | 5    | —    | —    | —   | —   | — |
| Guthion®, see Azinphos methyl              |                      |      |      |      |      |     |     |   |
| Gypsum                                     | 13397-24-5           |      |      |      |      |     |     |   |
| Total dust                                 | —                    | —    | 15   | —    | —    | —   | —   | — |
| Respirable fraction                        | —                    | —    | 5    | —    | —    | —   | —   | — |
| Hafnium                                    | 7440-58-6            | —    | 0.5  | —    | —    | —   | —   | — |
| Heptachlor                                 | 76-44-8              | —    | 0.5  | —    | —    | —   | —   | X |
| Heptane (n-Heptane)                        | 142-82-5             | 400  | 1600 | 500  | 2000 | —   | —   | — |
| Hexachlorobutadiene                        | 87-68-3              | 0.02 | 0.24 | —    | —    | —   | —   | — |
| Hexachlorocyclo-pentadiene                 | 77-47-4              | 0.01 | 0.1  | —    | —    | —   | —   | — |
| Hexachloroethane                           | 67-72-1              | 1    | 10   | —    | —    | —   | —   | X |
| Hexachloronapthalene                       | 1335-87-1            | —    | 0.2  | —    | —    | —   | —   | X |
| Hexafluoroacetone                          | 684-16-2             | 0.1  | 0.7  | —    | —    | —   | —   | X |
| n-Hexane                                   | 110-54-3             | 50   | 180  | —    | —    | —   | —   | — |
| Hexane isomers                             | Varies with compound | 500  | 1800 | 1000 | 3600 | —   | —   | — |
| 2-Hexanone (Methyl n-butyl ketone)         | 591-78-6             | 5    | 20   | —    | —    | —   | —   | — |
| Hexone (Methyl isobutyl ketone)            | 108-10-1             | 50   | 205  | 75   | 300  | —   | —   | — |
| sec-Hexyl acetate                          | 108-84-9             | 50-  | 300  | —    | —    | —   | —   | — |
| Hexylene glycol                            | 107-41-5             | —    | —    | —    | —    | 25  | 125 | — |
| Hydrazine                                  | 302-01-2             | 0.2  | 0.1  | —    | —    | —   | —   | X |
| Hydrogenated terphenyls                    | 61788-32-7           | 0.5  | 5    | —    | —    | —   | —   | — |
| Hydrogen bromide                           | 10035-10-6           | —    | —    | —    | —    | 3   | 10  | — |
| Hydrogen chloride                          | 7647-01-0            | —    | —    | —    | —    | 5   | 7   | — |
| Hydrogen cyanide                           | 74-90-8              | —    | —    | 4.7  | 5    | —   | —   | X |
| Hydrogen fluoride (as F)                   | 7664-39-3            | 3    | —    | 6    | —    | —   | —   | — |
| Hydrogen peroxide                          | 7722-84-1            | 1    | 1.4  | —    | —    | —   | —   | — |
| Hydrogen selenide (as Se)                  | 7783-07-5            | 0.05 | 0.2  | —    | —    | —   | —   | — |
| Hydrogen sulfide                           | 7783-06-4            | 10   | 14   | 15   | 21   | —   | —   | — |
| Hydroquinone                               | 123-31-9             | —    | 2    | —    | —    | —   | —   | — |
| 2-Hydroxypropyl acrylate                   | 999-61-1             | 0.5  | 3    | —    | —    | —   | —   | X |
| Indene                                     | 95-13-6              | 10   | 45   | —    | —    | —   | —   | — |
| Indium and compounds (as in)               | 7440-74-6            | —    | 0.1  | —    | —    | —   | —   | — |
| Iodine                                     | 7553-56-2            | —    | —    | —    | —    | 0.1 | 1   | — |
| Iodoform                                   | 75-47-8              | 0.6  | 10   | —    | —    | —   | —   | — |
| Iron oxide fume                            | 1309-37-1            | —    | 10   | —    | —    | —   | —   | — |
| Iron pentacarbonyl (as Fe)                 | 13463-40-6           | 0.1  | 0.8  | 0.2  | 1.6  | —   | —   | — |
| Iron salts (soluble) (as Fe)               | Varies with compound | —    | 1    | —    | —    | —   | —   | — |
| Isoamyl acetate                            | 123-92-2             | 100  | 525  | —    | —    | —   | —   | — |
| Isoamyl alcohol (primary and               | 123-51-3             | 100  | 360  | 125  | 450  | —   | —   | — |

(Rule 0800-1-1-.07, continued)

|                                                 |            |       |       |      |      |   |     |   |
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| secondary)                                      |            |       |       |      |      |   |     |   |
| Isobutyl acetate                                | 110-19-0   | 150   | 700   | —    | —    | — | —   | — |
| Isobutyl alcohol                                | 78-83-1    | 50    | 150   | —    | —    | — | —   | — |
| Isooctyl alcohol                                | 26952-21-6 | 50    | 270   | —    | —    | — | —   | X |
| Isophorone                                      | 78-59-1    | 4     | 23    | —    | —    | — | —   | — |
| Isophorone diisocyanate                         | 4098-71-9  | 0.005 | —     | 0.02 | —    | — | —   | X |
| 2-Isopropoxyethanol                             | 109-59-1   | 25    | 105   | —    | —    | — | —   | — |
| Isopropyl acetate                               | 108-21-4   | 250   | 950   | 310  | 1185 | — | —   | — |
| Isopropyl alcohol                               | 67-63-0    | 400   | 980   | 500  | 1225 | — | —   | — |
| Isopropylamine                                  | 75-31-0    | 5     | 12    | 10   | 24   | — | —   | — |
| N-isopropylaniline                              | 768-52-5   | 2     | 10    | —    | —    | — | —   | X |
| Isopropyl ether                                 | 108-20-3   | 500   | 2100  | —    | —    | — | —   | — |
| Isopropyl glycidyl ether (IGE)                  | 4016-14-2  | 50    | 240   | 75   | 360  | — | —   | — |
| Kaolin                                          |            |       |       |      |      |   |     |   |
| Total dust                                      | —          | —     | 10    | —    | —    | — | —   | — |
| Respirable fraction                             | —          | —     | 5     | —    | —    | — | —   | — |
| Ketene                                          | 463-51-4   | 0.5   | 0.9   | 1.5  | 3    | — | —   | — |
| Lead inorganic (as Pb); see 29 CFR 1910.1025    | 7439-92-1  |       |       |      |      |   |     |   |
| Limestone                                       | 1317-65-3  |       |       |      |      |   |     |   |
| Total dust                                      | —          | —     | 15    | —    | —    | — | —   | — |
| Respirable fraction                             | —          | —     | 5     | —    | —    | — | —   | — |
| Lindane                                         | 58-89-9    | —     | 0.5   | —    | —    | — | —   | X |
| Lithium hydride                                 | 7580-67-8  | —     | 0.025 | —    | —    | — | —   | — |
| L.P.G. (liquefied petroleum gas)                | 68476-85-7 | 1000  | 1800  | —    | —    | — | —   | — |
| Magnesite                                       | 546-93-0   | —     | —     | —    | —    | — | —   | — |
| Total dust                                      | —          | —     | 15    | —    | —    | — | —   | — |
| Respirable fraction                             | —          | —     | 5     | —    | —    | — | —   | — |
| Magnesium oxide fume                            | 1309-48-4  | —     | —     | —    | —    | — | —   | — |
| Total particulate                               | —          | —     | 10    | —    | —    | — | —   | — |
| Malathion                                       | 121-75-5   | —     | —     | —    | —    | — | —   | — |
| Total dust                                      | —          | —     | 10    | —    | —    | — | —   | X |
| Maleic anhydride                                | 108-31-6   | 0.25  | 1     | —    | —    | — | —   | — |
| Manganese compounds (as Mn)                     | 7439-96-5  | —     | —     | —    | —    | — | 5   | — |
| Manganese fume (as Mn)                          | 7439-96-5  | —     | 1     | —    | 3    | — | —   | — |
| Manganese cyclopenta-dienyl tricarbonyl (as Mn) | 12079-65-1 | —     | 0.1   | —    | —    | — | —   | X |
| Manganese tetroxide (as Mn)                     | 1317-35-7  | —     | 1     | —    | —    | — | —   | — |
| Marble                                          | 1317-65-3  | —     | —     | —    | —    | — | —   | — |
| Total dust                                      | —          | —     | 15    | —    | —    | — | —   | — |
| Respirable fraction                             | —          | —     | 5     | —    | —    | — | —   | — |
| Mercury (aryl and inorganic) (as Hg)            | 7439-97-6  | —     | —     | —    | —    | — | 0.1 | X |
| Mercury (organo) alkyl compounds (as Hg)        | 7439-97-6  | —     | 0.01  | —    | 0.03 | — | —   | X |
| Mercury (vapor) (as Hg)                         | 7439-97-6  | —     | 0.05  | —    | —    | — | —   | X |
| Mesityl oxide                                   | 141-79-7   | 15    | 60    | 25   | 100  | — | —   | — |
| Methacrylic acid                                | 79-41-4    | 20    | 70    | —    | —    | — | —   | X |
| Methanethiol; see Methyl mercaptan              |            |       |       |      |      |   |     |   |
| Methomyl (Lannate)                              | 16752-77-5 | —     | 2.5   | —    | —    | — | —   | — |
| Methoxychlor                                    | 72-43-5    | —     | —     | —    | —    | — | —   | — |
| Total dust                                      | —          | —     | 10    | —    | —    | — | —   | — |
| 2-Methoxyethanol; see Methyl                    |            |       |       |      |      |   |     |   |

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|                                                      |            |      |      |      |      |      |      |   |
|------------------------------------------------------|------------|------|------|------|------|------|------|---|
| cellosolve                                           |            |      |      |      |      |      |      |   |
| 4-Methoxyphenol                                      | 150-76-5   | —    | 5    | —    | —    | —    | —    | — |
| Methyl acetate                                       | 79-20-9    | 200  | 610  | 250  | 760  | —    | —    | — |
| Methyl acetylene (Propyne)                           | 74-99-7    | 1000 | 1650 | —    | —    | —    | —    | — |
| Methyl acetylene-propadiene mixture (MAPP)           | —          | 1000 | 1800 | 1250 | 2250 | —    | —    | — |
| Methyl acrylate                                      | 96-33-3    | 10   | 35   | —    | —    | —    | —    | X |
| Methylacrylonitrile                                  | 126-98-7   | 1    | 3    | —    | —    | —    | —    | X |
| Methylal (Dimethoxy-methane)                         | 109-87-5   | 100  | 3100 | —    | —    | —    | —    | — |
| Methyl alcohol                                       | 67-56-1    | 200  | 260  | 250  | 325  | —    | —    | X |
| Methylamine                                          | 74-89-5    | 10   | 12   | —    | —    | —    | —    | — |
| Methyl amyl alcohol; see Methyl isobutyl carbinol    |            |      |      |      |      |      |      |   |
| Methyl n-amyl ketone                                 | 110-43-0   | 100  | 465  | —    | —    | —    | —    | — |
| Methyl bromide                                       | 74-83-9    | 5    | 20   | —    | —    | —    | —    | X |
| Methyl butyl ketone; see 2-Hexanone                  |            |      |      |      |      |      |      |   |
| Methyl cellosolve (2-Methoxyethanol)                 | 109-86-4   | 25   | 80   | —    | —    | —    | —    | X |
| Methyl cellosolve acetate (2-Methoxyethyl acetate)   | 110-49-6   | 25   | 120  | —    | —    | —    | —    | X |
| Methyl chloride                                      | 74-87-3    | 50   | 105  | 100  | 210  | —    | —    | — |
| Methyl chloroform (1,1,1-Trichloroethane)            | 71-55-6    | 350  | 1900 | 450  | 2450 | —    | —    | — |
| Methyl 2-cyanoacrylate                               | 137-05-3   | 2    | 8    | 4    | 16   | —    | —    | — |
| Methyl cyclohexane                                   | 108-87-2   | 400  | 1600 | —    | —    | —    | —    | — |
| Methylcyclohexanol                                   | 25639-42-3 | 50   | 235  | —    | —    | —    | —    | — |
| o-Methylcyclohexanone                                | 583-60-8   | 50   | 230  | 75   | 345  | —    | —    | X |
| Methylcyclopentadienyl manganese tricarbonyl (as Mn) | 12106-13-3 | —    | 0.2  | —    | —    | —    | —    | X |
| Methyl demeton                                       | 8022-00-2  | —    | 0.5  | —    | —    | —    | —    | X |
| 4,4'-Methylene bis (2-chloroaniline (MBOCA))         | 101-14-4   | 0.02 | 0.22 | —    | —    | —    | —    | X |
| Methylene bis (4-cyclohexylisocyanate)               | 5124-30-1  | —    | —    | —    | —    | 0.01 | 0.11 | X |
| Methylene chloride; see 29 CFR 1910.1052             | 75-09-2    | —    | —    | —    | —    | —    | —    | — |
| Methylenedianiline; see 29 CFR 1910.1050             |            |      |      |      |      |      |      |   |
| Methyl ethyl ketone peroxide (MEKP)                  | 1338-23-4  | —    | —    | —    | —    | 0.7  | 5    | — |
| Methyl formate                                       | 107-31-3   | 100  | 250  | 150  | 375  | —    | —    | — |
| Methyl hydrazine (monomethyl hydrazine)              | 60-34-4    | —    | —    | —    | —    | 0.2  | 0.35 | X |
| Methyl iodide                                        | 74-88-4    | 2    | 10   | —    | —    | —    | —    | X |
| Methyl isoamyl ketone                                | 110-12-3   | 50   | 240  | —    | —    | —    | —    | — |
| Methyl isobutyl carbinol                             | 108-11-2   | 25   | 100  | 40   | 165  | —    | —    | X |
| Methyl isobutyl ketone; see Hexone                   |            |      |      |      |      |      |      |   |
| Methyl isocyanate                                    | 624-83-9   | 0.02 | 0.05 | —    | —    | —    | —    | X |
| Methyl isopropyl ketone                              | 563-80-4   | 200  | 705  | —    | —    | —    | —    | — |
| Methyl mercaptan                                     | 74-93-1    | 0.5  | 1    | —    | —    | —    | —    | — |
| Methyl methacrylate                                  | 80-62-6    | 100  | 410  | —    | —    | —    | —    | — |
| Methyl parathion                                     | 298-00-0   | —    | 0.2  | —    | —    | —    | —    | X |

(Rule 0800-1-1-.07, continued)

|                                               |            |        |       |        |       |      |     |   |
|-----------------------------------------------|------------|--------|-------|--------|-------|------|-----|---|
| Methyl propyl ketone; see 2-Pentanone         |            |        |       |        |       |      |     |   |
| Methyl silicate                               | 681-84-5   | 1      | 6     | —      | —     | —    | —   | — |
| alpha-Methyl styrene                          | 98-83-9    | 50     | 240   | 100    | 485   | —    | —   | — |
| Methylene disphenyl isocyanate (MDI)          | 101-68-8   | —      | —     | —      | —     | 0.02 | 0.2 | — |
| Metribuzin                                    | 21087-64-9 | —      | 5     | —      | —     | —    | —   | — |
| Mica; see Silicates                           |            |        |       |        |       |      |     |   |
| Molybdenum (as Mo)                            | 7439-98-7  |        |       |        |       |      |     |   |
| Soluble compounds                             | —          | —      | 5     | —      | —     | —    | —   | — |
| Insoluble compounds                           |            |        |       |        |       |      |     |   |
| Total dust                                    | —          | —      | 10    | —      | —     | —    | —   | — |
| Monocrotophos (Azodrin®)                      | 6923-22-4  | —      | 0.25  | —      | —     | —    | —   | — |
| Monomethyl aniline                            | 100-61-8   | 0.5    | 2     | —      | —     | —    | —   | X |
| Morpholine                                    | 110-91-8   | 20     | 70    | 30     | 105   | —    | —   | X |
| Naphtha (Coal tar)                            | 8030-30-6  | 100    | 400   | —      | —     | —    | —   | — |
| Naphthalene                                   | 91-20-3    | 10     | 50    | 15     | 75    | —    | —   | — |
| alpha-Naphthylamine; see 29 CFR 1910.1003     | 134-32-7   |        |       |        |       |      |     |   |
| beta-Naphthylamine; see 29 CFR 1910.1003      | 91-59-8    |        |       |        |       |      |     |   |
| Nickel carbonyl (as Ni)                       | 13463-39-3 | 0.001  | 0.007 | —      | —     | —    | —   | — |
| Nickel, metal and insoluble compounds (as Ni) | 7440-02-0  | —      | 1     | —      | —     | —    | —   | — |
| Nickel, soluble compounds (as Ni)             | 7440-02-0  | —      | 0.1   | —      | —     | —    | —   | — |
| Nicotine                                      | 54-11-5    | —      | 0.5   | —      | —     | —    | —   | X |
| Nitric acid                                   | 7697-37-2  | 2      | 5     | 4      | 10    | —    | —   | — |
| Nitric oxide                                  | 10102-43-9 | 25     | 30    | —      | —     | —    | —   | — |
| p-Nitroaniline                                | 100-01-6   | —      | 3     | —      | —     | —    | —   | X |
| Nitrobenzene                                  | 98-95-3    | 1      | 5     | —      | —     | —    | —   | X |
| p-Nitrochlorobenzene                          | 100-00-5   | —      | 1     | —      | —     | —    | —   | x |
| 4-Nitrodiphenyl; see 29 CFR 1910.1003         | 92-93-3    |        |       |        |       |      |     |   |
| Nitroethane                                   | 79-24-3    | 100    | 310   | —      | —     | —    | —   | — |
| Nitrogen dioxide                              | 10102-44-0 | —      | —     | 1      | 1.8   | —    | —   | — |
| Nitrogen trifluoride                          | 7783-54-2  | 10     | 29    | —      | —     | —    | —   | — |
| Nitroglycerin                                 | 55-63-0    | —      | —     | —      | 0.1   | —    | —   | X |
| Nitromethane                                  | 75-52-5    | 100    | 250   | —      | —     | —    | —   | — |
| 1-Nitropropane                                | 108-03-2   | 25     | 90    | —      | —     | —    | —   | — |
| 2-Nitropropane                                | 79--46-9   | 10     | 35    | —      | —     | —    | —   | — |
| N-Nitrosodimethylamine; see 29 CFR 1910.1016  | 62-79-9    |        |       |        |       |      |     |   |
| Nitrotoluene                                  |            |        |       |        |       |      |     |   |
| o-isomer                                      | 88-72-2    | 2      | 11    | —      | —     | —    | —   | X |
| m-isomer                                      | 99-08-1    | 2      | 11    | —      | —     | —    | —   | X |
| p-isomer                                      | 99-99-0    | 2      | 11    | —      | —     | —    | —   | X |
| Nitrotrichloromethane; see Chloropicin        |            |        |       |        |       |      |     |   |
| Nonane                                        | 111-84-2   | 200    | 1050  | —      | —     | —    | —   | — |
| Octachloronaphthalene                         | 2234-13-1  | —      | 0.1   | —      | 0.3   | —    | —   | X |
| Octane                                        | 111-65-9   | 300    | 1450  | 375    | 1800  | —    | —   | — |
| Oil mist, mineral                             | 8012-95-1  | —      | 5     | —      | —     | —    | —   | — |
| Osmium tetroxide (as Os)                      | 20816-12-0 | 0.0002 | 0.002 | 0.0006 | 0.006 | —    | —   | — |

(Rule 0800-1-1-.07, continued)

|                                                  |                                     |       |      |       |      |      |      |   |
|--------------------------------------------------|-------------------------------------|-------|------|-------|------|------|------|---|
| Oxalic acid                                      | 144-62-7                            | —     | 1    | —     | 2    | —    | —    | — |
| Oxygen difluoride                                | 7783-41-7                           | —     | —    | —     | —    | 0.05 | 0.1  | — |
| Ozone                                            | 10028-15-6                          | 0.1   | 0.2  | 0.3   | 0.6  | —    | —    | — |
| Paraffin wax fume                                | 8002-74-2                           | —     | 2    | —     | —    | —    | —    | — |
| Paraquat, respirable dust                        | 1910-42-5<br>4685-14-7<br>2074-50-2 | —     | 0.1  | —     | —    | —    | —    | X |
| Parathion                                        | 5838-2                              | —     | 0.1  | —     | —    | —    | —    | X |
| Particulates not otherwise regulated             |                                     |       |      |       |      |      |      |   |
| Total dust                                       | —                                   | —     | 15   | —     | —    | —    | —    | — |
| Respirable fraction                              | —                                   | —     | 5    | —     | —    | —    | —    | — |
| Pentaborane                                      | 19624-22-7                          | 0.005 | 0.01 | 0.015 | 0.03 | —    | —    | — |
| Pentachloronaphthalene                           | 1321-64-8                           | —     | 0.5  | —     | —    | —    | —    | X |
| Pentachlorophenol                                | 87-86-5                             | —     | 0.5  | —     | —    | —    | —    | X |
| Pentaerythritol                                  | 115-77-5                            | —     | —    | —     | —    | —    | —    | — |
| Total dust                                       | —                                   | —     | 10   | —     | —    | —    | —    | — |
| Respirable fraction                              | —                                   | —     | 5    | —     | —    | —    | —    | — |
| Pentane                                          | 109-66-0                            | 600   | 1800 | 750   | 2250 | —    | —    | — |
| 2-Pentanone (Methyl propyl ketone)               | 107-87-9                            | 200   | 700  | 250   | 875  | —    | —    | — |
| Perchloroethylene (Tetrachloroethylene)          | 127-18-4                            | 25    | 170  | —     | —    | —    | —    | — |
| Perchloromethyl mercaptan                        | 594-42-3                            | 0.1   | 0.8  | —     | —    | —    | —    | — |
| Perchloryl fluoride                              | 7616-94-6                           | 3     | 14   | 6     | 28   | —    | —    | — |
| Perlitte                                         |                                     |       |      |       |      |      |      |   |
| Total dust                                       | —                                   | —     | 15   | —     | —    | —    | —    | — |
| Respirable fraction                              | —                                   | —     | 5    | —     | —    | —    | —    | — |
| Petroleum distillates (Naphtha) (Rubber Solvent) | —                                   | 400   | 1600 | —     | —    | —    | —    | — |
| Phenol                                           | 108-95-2                            | 5     | 19   | —     | —    | —    | —    | X |
| Phenothiazine                                    | 92-84-2                             | —     | 5    | —     | —    | —    | —    | X |
| p-Phenylene diamine                              | 106-50-3                            | —     | 0.1  | —     | —    | —    | —    | X |
| Phenyl ether, vapor                              | 101-84-8                            | 1     | 7    | —     | —    | —    | —    | — |
| Phenyl ether-biphenyl mixture, vapor             | —                                   | 1     | 7    | —     | —    | —    | —    | — |
| Phenylethylene; see Styrene                      |                                     |       |      |       |      |      |      |   |
| Phenyl glycidyl ether (PGE)                      | 122-60-1                            | 1     | 6    | —     | —    | —    | —    | — |
| Phenylhydrazine                                  | 100-63-0                            | 5     | 20   | 10    | 45   | —    | —    | X |
| Phenyl mercaptan                                 | 108-98-5                            | 0.5   | 2    | —     | —    | —    | —    | — |
| Phenylphosphine                                  | 638-21-1                            | —     | —    | —     | —    | 0.05 | 0.25 | — |
| Phorate                                          | 298-02-2                            | —     | 0.05 | —     | 0.2  | —    | —    | X |
| Phosdrin (Mevinphos®)                            | 7786-34-7                           | 0.01  | 0.1  | 0.03  | 0.3  | —    | —    | X |
| Phosgene (Carbonyl chloride)                     | 75-44-5                             | 0.1   | 0.4  | —     | —    | —    | —    | — |
| Phosphine                                        | 7803-51-2                           | 0.3   | 0.4  | 1     | 1    | —    | —    | — |
| Phosphoric acid                                  | 7664-38-2                           | —     | 1    | —     | 3    | —    | —    | — |
| Phosphorus (yellow)                              | 7723-14-0                           | —     | 0.1  | —     | —    | —    | —    | — |
| Phosphorus oxychloride                           | 10025-87-3                          | 0.1   | 0.6  | —     | —    | —    | —    | — |
| Phosphorus pentachloride                         | 10026-13-8                          | —     | 1    | —     | —    | —    | —    | — |
| Phosphorus pentasulfide                          | 1314-80-3                           | —     | 1    | —     | 3    | —    | —    | — |
| Phosphorus trichloride                           | 7719-12-2                           | 0.2   | 1.5  | 0.5   | 3    | —    | —    | — |
| Phthalic anhydride                               | 85-44-9                             | 1     | 6    | —     | —    | —    | —    | — |
| m-Phthalodinitrile                               | 626-17-5                            | —     | 5    | —     | —    | —    | —    | — |
| Picloram                                         | 1918-02-1                           | —     | —    | —     | —    | —    | —    | — |

(Rule 0800-1-1-.07, continued)

|                                                                                   |             |      |       |     |      |   |   |   |
|-----------------------------------------------------------------------------------|-------------|------|-------|-----|------|---|---|---|
| Total dust                                                                        | —           | —    | 10    | —   | —    | — | — | — |
| Respirable fraction                                                               | —           | —    | 5     | —   | —    | — | — | — |
| Picric acid                                                                       | 88-89-1     | —    | 0.1   | —   | —    | — | — | x |
| Piperazine dihydro-chloride                                                       | 142-64-3    | —    | 5     | —   | —    | — | — | — |
| Pindone (2-Pivalyl-1,3-indandione                                                 | 83-26-1     | —    | 0.1   | —   | —    | — | — | — |
| Plaster of Paris                                                                  | 26499-65-0  | —    | —     | —   | —    | — | — | — |
| Total dust                                                                        | —           | —    | 15    | —   | —    | — | — | — |
| Respirable fraction                                                               | —           | —    | 5     | —   | —    | — | — | — |
| Platinum (as Pt)                                                                  | 7440-06-4   | —    | —     | —   | —    | — | — | — |
| Metal                                                                             | —           | —    | 1     | —   | —    | — | — | — |
| Soluble salts                                                                     | —           | —    | 0.002 | —   | —    | — | — | — |
| Portland cement                                                                   | 65997-15-1  | —    | —     | —   | —    | — | — | — |
| Total dust                                                                        | —           | —    | 10    | —   | —    | — | — | — |
| Respirable fraction                                                               | —           | —    | 5     | —   | —    | — | — | — |
| Potassium hydroxide                                                               | 1310-58-3   | —    | —     | —   | —    | — | 2 | — |
| Propane                                                                           | 74-98-6     | 1000 | 1800  | —   | —    | — | — | — |
| Propargl alcohol                                                                  | 107-19-7    | 1    | 2     | —   | —    | — | — | X |
| beta-Propiolactone; see 29 CFR 1910.1013                                          | 57-57-8     |      |       |     |      |   |   |   |
| Propionic acid                                                                    | 79-09-4     | 10   | 30    | —   | —    | — | — | — |
| Propoxur (Baygon)                                                                 | 114-26-1    | —    | 0.5   | —   | —    | — | — | — |
| n-Propyl acetate                                                                  | 109-60-40   | 200  | 840   | 250 | 1050 | — | — | — |
| n-propyl alcohol                                                                  | 71-23-8     | 200  | 500   | 250 | 625  | — | — | — |
| n-Propyl nitrate                                                                  | 627-13-4    | 25   | 105   | 40  | 170  | — | — | — |
| Propylene dichloride                                                              | 78-87-5     | 75   | 360   | 110 | 510  | — | — | — |
| Propylene glycol dinitrate                                                        | 6423-43-4   | 0.05 | 0.3   | —   | —    | — | — | — |
| Propylene glycol monomethyl ether                                                 | 107-98-2    | 100  | 380   | 150 | 540  | — | — | — |
| Propylene imine                                                                   | 75-55-8     | 2    | 5     | —   | —    | — | — | X |
| Propylene oxide                                                                   | 75-56-9     | 20   | 50    | —   | —    | — | — | — |
| Propyne; see Methyl acetylene                                                     |             |      |       |     |      |   |   |   |
| Pyrethrum                                                                         | 8003-34-7   | —    | 5     | —   | —    | — | — | — |
| Pyridine                                                                          | 110-86-1    | 5    | 15    | —   | —    | — | — | — |
| Quinone                                                                           | 106-51-4    | 0.1  | 0.4   | —   | —    | — | — | — |
| Resorcinol                                                                        | 108-46-3    | 10   | 45    | 20  | 90   | — | — | — |
| Rhodium (as Rh), metal fume and insoluble compounds                               | 7440-16-6   | —    | 0.1   | —   | —    | — | — | — |
| Rhodium (as Rh), soluble compounds                                                | 744-16-6    | —    | 0.001 | —   | —    | — | — | — |
| Ronnel                                                                            | 299-84-3    | —    | 10    | —   | —    | — | — | — |
| Rosin core solder pyrolysis products, as formaldehyde                             | —           | —    | 0.1   | —   | —    | — | — | — |
| Rotenone                                                                          | 83-79-4     | —    | 5     | —   | —    | — | — | — |
| Rouge                                                                             |             |      |       |     |      |   |   |   |
| Total dust                                                                        | —           | —    | 10    | —   | —    | — | — | — |
| Respirable fraction                                                               | —           | —    | 5     | —   | —    | — | — | — |
| Selenium compounds (as Se)                                                        | 7782-49-2   | —    | 0.2   | —   | —    | — | — | — |
| Selenium hexafluoride (as Se)                                                     | 7783-79-1   | 0.05 | 0.4   | —   | —    | — | — | — |
| Silica, amorphous, precipitated and gel                                           | 112926-00-8 | —    | 6     | —   | —    | — | — | — |
| Silica, amorphous, diatomaceous earth, containing less than 1% crystalline silica | 61790-53-2  | —    | 6     | —   | —    | — | — | — |
| Silica, crystalline cristobalite,                                                 | 14464-46-1  | —    | 0.05  | —   | —    | — | — | — |

(Rule 0800-1-1-.07, continued)

|                                                                             |            |      |      |     |         |     |     |   |
|-----------------------------------------------------------------------------|------------|------|------|-----|---------|-----|-----|---|
| respirable dust                                                             |            |      |      |     |         |     |     |   |
| Silica, crystalline quartz, respirable dust                                 | 14808-60-7 | —    | 0.1  | —   | —       | —   | —   | — |
| Silica, crystalline tripoli (as quartz), respirable dust                    | 1317-95-9  | —    | 0.1  | —   | —       | —   | —   | — |
| Silica, crystalline tridomite, respirable dust                              | 15468-32-3 | —    | 0.05 | —   | —       | —   | —   | — |
| Silica, fused, respirable dust                                              | 60676-86-0 | —    | 0.1  | —   | —       | —   | —   | — |
| Silicates (less than 1% (crystalline silica))                               |            |      |      |     |         |     |     |   |
| Mica (respirable dust)                                                      | 12001-26-2 | —    | 3    | —   | —       | —   | —   | — |
| Soapstone, total dust                                                       | —          | —    | 6    | —   | —       | —   | —   | — |
| Soapstone, respirable dust                                                  | —          | —    | 3    | —   | —       | —   | —   | — |
| Talc (containing asbestos); use asbestos limit See 29 CFR 1910.1001         |            |      |      |     |         |     |     |   |
| Talc (containing no asbestos); Respirable dust                              | 14807-96-6 | —    | 2    | —   | —       | —   | —   | — |
| Tremolite (use asbestos limit); See 29 CFR 1910.1001                        |            |      |      |     |         |     |     |   |
| Silicon                                                                     | 7440-21-3  |      |      |     |         |     |     |   |
| Total dust                                                                  | —          | —    | 10   | —   | —       | —   | —   | — |
| Respirable fraction                                                         | —          | —    | 5    | —   | —       | —   | —   | — |
| Silicon carbide                                                             | 409-21-2   |      |      |     |         |     |     |   |
| Total dust                                                                  | —          | —    | 10   | —   | —       | —   | —   | — |
| Respirable fraction                                                         | —          | —    | 5    | —   | —       | —   | —   | — |
| Silicon tetrahydride                                                        | 7803-62-5  | 5    | 7    | —   | —       | —   | —   | — |
| Silver, metal and soluble compounds (as Ag)                                 | 7440-22-4  | —    | 0.01 | —   | —       | —   | —   | — |
| Soapstone; see Silicates                                                    |            |      |      |     |         |     |     |   |
| Sodium azide                                                                | 26628-22-8 |      |      |     |         |     |     |   |
| (as HN <sub>3</sub> )                                                       | —          | —    | —    | —   | —       | 0.1 | —   | X |
| (as NaN <sub>3</sub> )                                                      | —          | —    | —    | —   | —       | —   | 0.3 | X |
| Sodium bisulfite                                                            | 7631-90-5  | —    | 5    | —   | —       | —   | —   | — |
| Sodium fluoroacetate                                                        | 62-74-8    | —    | 0.05 | —   | 0.15    | —   | —   | X |
| Sodium hydroxide                                                            | 1310-73-2  | —    | —    | —   | —       | —   | 2   | — |
| Sodium metabisulphite                                                       | 7681-57-4  | —    | 5    | —   | —       | —   | —   | — |
| Starch                                                                      | 9005-25-8  |      |      |     |         |     |     |   |
| Total dust                                                                  | —          | —    | 15   | —   | —       | —   | —   | — |
| Respirable fraction                                                         | —          | —    | 5    | —   | —       | —   | —   | — |
| Stibine                                                                     | 7803-52-3  | 0.1  | 0.5  | —   | —       | —   | —   | — |
| Stoddard solvent                                                            | 8052-41-3  | 100  | 525  | —   | —       | —   | —   | — |
| Strychnine                                                                  | 57-24-9    | —    | 0.15 | —   | —       | —   | —   | — |
| Styrene                                                                     | 100-42-5   | 50   | 215  | 100 | 425     | —   | —   | — |
| Subtilisins (Protolytic enzymes) sample 600-800 lpm for at least 60 minutes | 9014-01-1  | —    | —    | —   | 0.00006 | —   | —   | — |
| Sucrose                                                                     | 57-50-1    | —    | —    | —   | —       | —   | —   | — |
| Total dust                                                                  | —          | —    | 15   | —   | —       | —   | —   | — |
| Respirable fraction                                                         | —          | —    | 5    | —   | —       | —   | —   | — |
| Sulfur dioxide                                                              | 7446-09-5  | 2    | 5    | 5   | 10      | —   | —   | — |
| Sulfur hexafluoride                                                         | 2551-62-4  | 1000 | 6000 | —   | —       | —   | —   | — |
| Sulfuric acid                                                               | 7664-93-9  | —    | 1    | —   | —       | —   | —   | — |

(Rule 0800-1-1-.07, continued)

|                                                  |            |       |       |      |      |      |     |   |
|--------------------------------------------------|------------|-------|-------|------|------|------|-----|---|
| Sulfur monochloride                              | 10025-67-9 | —     | —     | —    | —    | 1    | 6   | — |
| Sulfur pentafluoride                             | 5714-22-7  | —     | —     | —    | —    | 0.01 | 0.1 | — |
| Sulfur tetrafluoride                             | 7783-60-0  | —     | —     | —    | —    | 0.1  | 0.4 | — |
| Sulfuryl fluoride                                | 2699-79-8  | 5     | 20    | 10   | 40   | —    | —   | — |
| Sulprofos                                        | 35400-43-2 | —     | 1     | —    | —    | —    | —   | — |
| Systox®, see Demeton                             |            |       |       |      |      |      |     |   |
| 2,4,5-T                                          | 93-76-5    | —     | 10    | —    | —    | —    | —   | — |
| Talc; see Silicates                              |            |       |       |      |      |      |     |   |
| Tantalum, metal and oxide dust                   | 7440-25-7  | —     | 5     | —    | —    | —    | —   | — |
| TEDP (Sulfotep)                                  | 3689-24-5  | —     | 0.2   | —    | —    | —    | —   | X |
| Tellurium and compounds (as Te)                  | 13494-80-9 | —     | 0.1   | —    | —    | —    | —   | — |
| Tellurium hexafluoride (as Te)                   | 7783-80-4  | 0.02  | 0.2   | —    | —    | —    | —   | — |
| Temephos                                         | 3383-96-8  |       |       |      |      |      |     |   |
| Total dust                                       | —          | —     | 10    | —    | —    | —    | —   | — |
| Respirable fraction                              | —          | —     | 5     | —    | —    | —    | —   | — |
| TEPP                                             | 107-49-3   | —     | 0.05  | —    | —    | —    | —   | X |
| Terphenyls                                       | 26140-60-3 | —     | —     | —    | —    | 0.5  | 5   | — |
| 1,1,1,2-Tetrachloro-2,2-difluoroethane           | 76-11-9    | 500   | 4170  | —    | —    | —    | —   | — |
| 1,1,2,2-Tetrachloro-1,2-difluoroethane           | 76-12-0    | 500   | 4170  | —    | —    | —    | —   | — |
| 1,1,2,2-Tetrachloroethane                        | 79-34-5    | 1     | 7     | —    | —    | —    | —   | X |
| Tetrachoroethylene; see Perchloroethylene        |            |       |       |      |      |      |     |   |
| Tetrachloromethane; see Carbon tetrachloride     |            |       |       |      |      |      |     |   |
| Tetrachloronaphthalene                           | 1335-88-2  | —     | 2     | —    | —    | —    | —   | X |
| Tetraethyl lead (as Pb)                          | 78-00-2    | —     | 0.075 | —    | —    | —    | —   | X |
| Tetrahydrofuran                                  | 109-99-9   | 200   | 590   | 250  | 735  | —    | —   | — |
| Tetramethyl lead, (as Pb)                        | 75-74-1    | —     | 0.75  | —    | —    | —    | —   | X |
| Tetramethyl succinonitrile                       | 3333-52-6  | 0.5   | 3     | —    | —    | —    | —   | X |
| Tetranitromethane                                | 509-14-8   | 1     | 8     | —    | —    | —    | —   | — |
| Tetrasodium pyrophosphate                        | 7722-88-5  | —     | 5     | —    | —    | —    | —   | — |
| Tetryl (2,4,6-Trinitrophenyl-methyl-nitramine)   | 479-45-8   | —     | 1.5   | —    | —    | —    | —   | X |
| Thalium, Soluble compounds (as Tl)               | 7440-28-0  | —     | 0.1   | —    | —    | —    | —   | X |
| 4,4'-Thiobis(6-tert, Butyl-m-cresol)             | 96-69-5    | —     | —     | —    | —    | —    | —   | — |
| Total dust                                       | —          | —     | 10    | —    | —    | —    | —   | — |
| Respirable fraction                              | —          | —     | 5     | —    | —    | —    | —   | — |
| Thioglycolic acid                                | 68-11-1    | 1     | 4     | —    | —    | —    | —   | X |
| Thionyl chloride                                 | 7719-09-7  | —     | —     | —    | —    | 1    | 5   | — |
| Thiram                                           | 137-26-8   | —     | 5     | —    | —    | —    | —   | — |
| Tin, inorganic compounds (except oxides) (as Sn) | 7440-31-5  | —     | 2     | —    | —    | —    | —   | — |
| Tin, organic compounds (as Sn)                   | 7440-31-5  | —     | 0.1   | —    | —    | —    | —   | X |
| Tin oxide (as Sn)                                | 21651-19-4 | —     | 2     | —    | —    | —    | —   | — |
| Titanium dioxide                                 | 13463-67-7 | —     | —     | —    | —    | —    | —   | — |
| Total dust                                       | —          | —     | 10    | —    | —    | —    | —   | — |
| Toluene                                          | 108-88-3   | 100   | 375   | 150  | 580  | —    | —   | — |
| Toluene-2,4-diisocynate (TDI)                    | 584-84-9   | 0.005 | 0.04  | 0.02 | 0.15 | —    | —   | — |
| m-Toluidine                                      | 108-44-1   | 2     | 9     | —    | —    | —    | —   | X |
| o-Toluidine                                      | 95-53-4    | 5     | 22    | —    | —    | —    | —   | X |
| p-Toluidine                                      | 106-49-0   | 2     | 9     | —    | —    | —    | —   | X |

(Rule 0800-1-1-.07, continued)

|                                                 |            |       |      |      |      |   |    |   |
|-------------------------------------------------|------------|-------|------|------|------|---|----|---|
| Toxaphene; see Chlorinated camphene             |            |       |      |      |      |   |    |   |
| Tremolite; see Silicates                        |            |       |      |      |      |   |    |   |
| Tributyl phosphate                              | 126-73-8   | 0.2   | 2.5  | —    | —    | — | —  | — |
| Trichloroacetic acid                            | 76-03-9    | 1     | 7    | —    | —    | — | —  | — |
| 1,2,4-Trichlorobenzene                          | 120-82-1   | —     | —    | —    | —    | 5 | 40 | — |
| 1,1,1-Trichloroethane; see Methyl chloroform    |            |       |      |      |      |   |    |   |
| 1,1,2-Trichloroethane                           | 79-00-5    | 10    | 45   | —    | —    | — | —  | X |
| Trichloroethylene                               | 79-01-6    | 50    | 270  | 200  | 1080 | — | —  | — |
| Trichloromethane; see Chloroform                |            |       |      |      |      |   |    |   |
| Trichloronaphthalene                            | 1321-65-9  | —     | 5    | —    | —    | — | —  | X |
| 1,2,3-Trichloropropane                          | 96-18-4    | 10    | 60   | —    | —    | — | —  | — |
| 1,1,2-Trichloro-1,2,2-trifluoroethane           | 76-13-1    | 1000  | 7600 | 1250 | 9500 | — | —  | — |
| Triethylamine                                   | 121-44-8   | 10    | 40   | 15   | 60   | — | —  | — |
| Trifluorobromomethane                           | 75-63-8    | 1000  | 6100 | —    | —    | — | —  | — |
| Trimellitic anhydride                           | 552-30-7   | 0.005 | 0.04 | —    | —    | — | —  | — |
| Trimethylamine                                  | 75-50-3    | 10    | 24   | 15   | 36   | — | —  | — |
| Trimethyl benzene                               | 25551-13-7 | 25    | 125  | —    | —    | — | —  | — |
| Trimethyl phosphite                             | 121-45-9   | 2     | 10   | —    | —    | — | —  | — |
| 2,4,6-Trinitrophenyl; see Picric acid           |            |       |      |      |      |   |    |   |
| 2,4,6-Trinitrophenylmethyl nitamine; see Tetryl |            |       |      |      |      |   |    |   |
| 2,4,6-Trinitrotoluene (TNT)                     | 118-96-7   | —     | 0.5  | —    | —    | — | —  | X |
| Triorthocresyl phosphate                        | 78-30-8    | —     | 0.1  | —    | —    | — | —  | X |
| Triphenyl amine                                 | 603-34-9   | —     | 5    | —    | —    | — | —  | — |
| Triphenyl phosphate                             | 115-86-6   | —     | 3    | —    | —    | — | —  | — |
| Tungsten (as W)                                 | 7440-33-7  | —     | —    | —    | —    | — | —  | — |
| Insoluble compounds                             | —          | —     | 5    | —    | 10   | — | —  | — |
| Soluble compounds                               | —          | —     | 1    | —    | 3    | — | —  | — |
| Turpentine                                      | 8006-64-2  | 100   | 560  | —    | —    | — | —  | — |
| Uranium (as U)                                  | 7440-61-1  | —     | —    | —    | —    | — | —  | — |
| Soluble compounds                               | —          | —     | 0.05 | —    | —    | — | —  | — |
| Insoluble compounds                             | —          | —     | 0.2  | —    | 0.6  | — | —  | — |
| n-Valeraldehyde                                 | 110-62-3   | 50    | 175  | —    | —    | — | —  | — |
| Vanadium fume and                               | 1314-62-1  | —     | —    | —    | —    | — | —  | — |
| Respirable dust (as V2O5)                       | —          | —     | 0.05 | —    | —    | — | —  | — |
| Vegetable oil mist                              | —          | —     | —    | —    | —    | — | —  | — |
| Total dust                                      | —          | —     | 15   | —    | —    | — | —  | — |
| Respirable fraction                             | —          | —     | 5    | —    | —    | — | —  | — |
| Vinyl acetate                                   | 108-05-4   | 10    | 30   | 20   | 60   | — | —  | — |
| Vinyl benzene; see Styrene                      |            |       |      |      |      |   |    |   |
| Vinyl bromide                                   | 593-60-2   | 5     | 20   | —    | —    | — | —  | — |
| Vinyl chloride; see 29 CFR 1910.1017            | 75-01-4    | —     | —    | —    | —    | — | —  | — |
| Vinyl cyanide; see Acrylonitrile                |            |       |      |      |      |   |    |   |
| Vinyl cyclohexene dioxide                       | 106-87-6   | 10    | 60   | —    | —    | — | —  | X |
| Vinylidene chloride (1,1-Dichloroethylene)      | 75-35-4    | 1     | 4    | —    | —    | — | —  | — |
| Vinyl toluene                                   | 24994      | 100   | 480  | —    | —    | — | —  | — |
| VM & P Naphtha                                  | 8032-32-4  | 300   | 1350 | 400  | 1800 | — | —  | — |
| Warfarin                                        | 81-81-2    | —     | 0.1  | —    | —    | — | —  | — |
| Welding fumes (total particulate)***            | —          | —     | 5    | —    | —    | — | —  | — |

(Rule 0800-1-1-.07, continued)

|                                                              |                      |     |     |     |     |   |     |   |
|--------------------------------------------------------------|----------------------|-----|-----|-----|-----|---|-----|---|
| Wood dust, all soft and hard woods, except Western red cedar | —                    | —   | 5   | —   | 10  | — | —   | — |
| Wood dust, Western red cedar                                 | —                    | —   | 2.5 | —   | —   | — | —   | — |
| Xylenes (o-, m-, p- isomers)                                 | 1330-20-7            | 100 | 435 | 150 | 655 | — | —   | — |
| m-Xylene alpha, alpha-diamine                                | 1477-55-0            | —   | —   | —   | —   | — | 0.1 | X |
| Xylidine                                                     | 1300-73-8            | 2   | 10  | —   | —   | — | —   | X |
| Yttrium                                                      | 7440-65-5            | —   | 1   | —   | —   | — | —   | — |
| Zinc chloride fume                                           | 7646-85-7            | —   | 1   | —   | 2   | — | —   | — |
| Zinc chromate (as CrO <sub>3</sub> )                         | Varies with compound | —   | —   | —   | —   | — | 0.1 | — |
| Zinc oxide fume                                              | 1314-13-2            | —   | 5   | —   | 10  | — | —   | — |
| Zinc oxide                                                   | 1314-13-2            | —   | —   | —   | —   | — | —   | — |
| Total dust                                                   | —                    | —   | 10  | —   | —   | — | —   | — |
| Respirable fraction                                          | —                    | —   | 5   | —   | —   | — | —   | — |
| Zinc stearate                                                | 557-05-1             | —   | —   | —   | —   | — | —   | — |
| Total dust                                                   | —                    | —   | 10  | —   | —   | — | —   | — |
| Respirable fraction                                          | —                    | —   | 5   | —   | —   | — | —   | — |
| Zirconium compounds (as Zr)                                  | 7440-67-7            | —   | 5   | —   | 10  | — | —   | — |

**Authority:** T.C.A. §§4-3-1411, 50-3-105, 50-3-201, and 50-3-202. **Administrative History:** Original rule filed January 15, 1977; effective February 13, 1977. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repeal and new rule filed March 31, 1983; effective June 15, 1983. Repeal and new rule filed August 13, 1999; effective December 29, 1999. Repeal and new rule filed January 11, 2002; effective May 31, 2002. Amendment filed April 21, 2004; August 27, 2004. Amendment filed November 16, 2006; effective date March 30, 2007.