

**CHAPTER 100**  
**SAFETY AND HEALTH STANDARDS FOR**  
**PUBLIC EMPLOYEES**

**Authority**

N.J.S.A. 34:1-20, 34:1A-3(c), and 34:6A-25 et seq., specifically 34:6A-30, 31 and 32.

**Source and Effective Date**

R.2005 d.21, effective December 8, 2004.  
 See: 36 N.J.R. 4210(a), 37 N.J.R. 80(c).

**Chapter Expiration Date**

In accordance with N.J.S.A. 52:14B-5.1c, Chapter 100, Safety and Health Standards for Public Employees, expires on June 6, 2010. See: 42 N.J.R. 128(a).

**Chapter Historical Note**

Chapter 100, General Provisions, was filed prior to September 1, 1969.

Chapter 100, General Provisions, was repealed, and Chapter 100, Migrant Labor, was adopted as R.1975 d.101, effective April 16, 1975. See: 7 N.J.R. 231(a).

Chapter 100, Migrant Labor, was repealed by R.1978 d.288, effective August 16, 1978. See: 10 N.J.R. 258(a), 10 N.J.R. 400(d).

Chapter 100, Safety and Health Standards for Public Employees, was adopted as new rules by R.1984 d.510, effective November 5, 1984. See: 16 N.J.R. 2057(a), 16 N.J.R. 3051(a).

Subchapter 12, Asbestos, was adopted, and Subchapter 7, Standards and Publications Referred to in This Chapter, was recodified as Subchapter 17 by R.1986, d.285, effective July 21, 1986. See: 18 N.J.R. 811(b), 18 N.J.R. 1479(b).

Subchapter 9, Work in Confined Spaces, was adopted as R.1988 d.451, effective September 19, 1988. See: 20 N.J.R. 1523(a), 20 N.J.R. 2391(a).

Subchapter 11, Control of Hazardous Energy Sources, was adopted as R.1989 d.238, effective May 1, 1989. See: 21 N.J.R. 620(a), 21 N.J.R. 1144(a).

Subchapter 8, Standards for Indoor Firing Ranges for Public Employees, was adopted as R.1989 d.357, effective July 3, 1989. See: 21 N.J.R. 1094(a), 21 N.J.R. 1829(b).

Pursuant to Executive Order No. 66(1978), Chapter 100, Safety and Health Standards for Public Employees, was readopted as R.1989 d.536, effective September 22, 1989. See: 21 N.J.R. 2224(a), 21 N.J.R. 3299(b).

Subchapter 10, Standards for Firefighters, was adopted as R.1993 d.28, effective January 4, 1993. See: 24 N.J.R. 73(a), 25 N.J.R. 180(b).

Pursuant to Executive Order No. 66(1978), Chapter 100, Safety and Health Standards for Public Employees, was readopted as R.1994 d.492, effective August 26, 1994. See: 26 N.J.R. 2776(a), 26 N.J.R. 3872(b).

Subchapter 12, Asbestos, was repealed by R.1996 d.370, effective August 5, 1996. See: 28 N.J.R. 2507(a), 28 N.J.R. 3801(a).

Subchapter 13, Indoor Air Quality Standard, was adopted as R.1997 d.109, effective March 3, 1997. See: 28 N.J.R. 4564(a), 29 N.J.R. 796(a).

Subchapter 9, Work in Confined Spaces, and Subchapter 11, Control of Hazardous Energy Sources, were repealed by R.1998 d.574, effective December 7, 1998. See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

Pursuant to Executive Order No. 66(1978), Chapter 100, Safety and Health Standards for Public Employees, was readopted as R.1999 d.319, effective August 26, 1999. See: 31 N.J.R. 1849(b), 31 N.J.R. 2755(c).

Subchapter 3A, Adoption of Standards, and Subchapter 7, Standard for Hazard Communication, were adopted by R.2004 d.183, effective May 7, 2004. See: 36 N.J.R. 150(a), 36 N.J.R. 2244(a).

Chapter 100, Safety and Health Standards for Public Employees, was readopted as R.2005 d.21, effective December 8, 2004. See: Source and Effective Date.

Subchapter 14, Shipyard Employment, Subchapter 15, Marine Terminals, Subchapter 16, Longshoring, Subchapter 17, Gear Certification, and Subchapter 18, Workshops/Rehabilitation Facilities, were adopted as special new rules; and former Subchapter 17, Standards and Publications Referred to in this Chapter, was recodified as N.J.A.C. 12:100-19 by R.2009 d.391, effective December 21, 2009 (to expire June 6, 2010). See: 41 N.J.R. 4830(a).

**CHAPTER TABLE OF CONTENTS**

**SUBCHAPTER 1. GENERAL PROVISIONS**

- 12:100-1.1 Purpose
- 12:100-1.2 Scope
- 12:100-1.3 Documents referred to by reference
- 12:100-1.4 through 12:100-1.6 (Reserved)

**SUBCHAPTER 2. DEFINITIONS**

- 12:100-2.1 Definitions

**SUBCHAPTER 3. ADMINISTRATION**

- 12:100-3.1 Scope of subchapter
- 12:100-3.2 Compliance
- 12:100-3.3 Interface of state agencies

**SUBCHAPTER 3A. ADOPTION OF STANDARDS**

- 12:100-3A.1 Adoption of standards in compliance with applicable Federal standards
- 12:100-3A.2 Adoption of standards more stringent than Federal standards
- 12:100-3A.3 Adoption of emergency temporary standards

**SUBCHAPTER 4. GENERAL STANDARDS**

- 12:100-4.1 Scope of subchapter; "employer" defined
- 12:100-4.2 Adoption by reference
- 12:100-4.3 Compliance with referenced standards

**SUBCHAPTER 5. CONSTRUCTION STANDARDS**

- 12:100-5.1 Scope of subchapter
- 12:100-5.2 Adoption by reference
- 12:100-5.3 Compliance with referenced standards

**SUBCHAPTER 6. AGRICULTURAL STANDARDS**

- 12:100-6.1 Scope of subchapter
- 12:100-6.2 Adoption by reference
- 12:100-6.3 Compliance with referenced standards

**SUBCHAPTER 7. STANDARD FOR HAZARD COMMUNICATION**

- 12:100-7.1 Purpose
- 12:100-7.2 Scope and application
- 12:100-7.3 Definitions
- 12:100-7.4 Hazard determination
- 12:100-7.5 Written hazard communication program
- 12:100-7.6 Labels and other forms of warning
- 12:100-7.7 Material safety data sheets

- 12:100-7.8 Employee information and training
- 12:100-7.9 Trade secrets

APPENDIX A

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

**SUBCHAPTER 8. STANDARDS FOR INDOOR FIRING RANGES FOR PUBLIC EMPLOYEES**

- 12:100-8.1 Scope
- 12:100-8.2 Definitions
- 12:100-8.3 Lead standard
- 12:100-8.4 Ammunition
- 12:100-8.5 Ventilation system
- 12:100-8.6 Noise exposure
- 12:100-8.7 Water drains
- 12:100-8.8 Work practices

**SUBCHAPTER 9. (RESERVED)**

**SUBCHAPTER 10. STANDARDS FOR FIREFIGHTERS**

- 12:100-10.1 Scope; standards information
- 12:100-10.2 Definitions
- 12:100-10.3 Organization, training and education
- 12:100-10.4 Personnel; limitations on ability to perform
- 12:100-10.5 Protective clothing
- 12:100-10.6 Protective clothing; foot and leg protection
- 12:100-10.7 Protective clothing; body protection
- 12:100-10.8 Protective clothing; hand protection
- 12:100-10.9 Protective clothing; head, eye and face protection
- 12:100-10.10 Respiratory protection devices
- 12:100-10.11 Life-safety rope, harnesses and hardware
- 12:100-10.12 Personal alert safety system
- 12:100-10.13 Hearing protection
- 12:100-10.14 Filling air cylinders
- 12:100-10.15 Fire apparatus operations
- 12:100-10.16 Maintenance of firefighter equipment

**SUBCHAPTERS 11 THROUGH 12. (RESERVED)**

**SUBCHAPTER 13. INDOOR AIR QUALITY STANDARD**

- 12:100-13.1 Scope
- 12:100-13.2 Definitions
- 12:100-13.3 Compliance program
- 12:100-13.4 Controls of specific contaminant sources
- 12:100-13.5 Air quality during renovation and remodeling
- 12:100-13.6 Recordkeeping
- 12:100-13.7 Employer's response to a signed PEOSH complaint
- 12:100-13.8 Indoor air quality (IAQ) compliance documents

**SUBCHAPTER 14. SHIPYARD EMPLOYMENT**

- 12:100-14.1 Scope of subchapter
- 12:100-14.2 Adoption by reference
- 12:100-14.3 Compliance with referenced standards

**SUBCHAPTER 15. MARINE TERMINALS**

- 12:100-15.1 Scope of subchapter
- 12:100-15.2 Adoption by reference
- 12:100-15.3 Compliance with referenced standards

**SUBCHAPTER 16. LONGSHORING**

- 12:100-16.1 Scope of subchapter
- 12:100-16.2 Adoption by reference
- 12:100-16.3 Compliance with referenced standards

**SUBCHAPTER 17. GEAR CERTIFICATION**

- 12:100-17.1 Scope of subchapter
- 12:100-17.2 Adoption by reference
- 12:100-17.3 Compliance with referenced standards

**SUBCHAPTER 18. WORKSHOPS/REHABILITATION FACILITIES**

- 12:100-18.1 Scope of subchapter
- 12:100-18.2 Adoption by reference
- 12:100-18.3 Compliance with referenced standards

**SUBCHAPTER 19. STANDARDS AND PUBLICATIONS REFERRED TO IN THIS CHAPTER**

- 12:100-19.1 Documents referred to by reference
- 12:100-19.2 Availability of documents for inspection
- 12:100-19.3 Availability of documents from issuing organization

**SUBCHAPTER 1. GENERAL PROVISIONS**

**12:100-1.1 Purpose**

The purpose of this chapter is to protect employees in the public sector by providing standards, which are at least as effective as the standards promulgated under Section 6 of the Federal Occupational Safety and Health Act of 1970, 29 USC 651 et seq.

Recodified from N.J.A.C. 12:100-1.3 by R.1998 d.574, effective December 7, 1998.

See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

Former N.J.A.C. 12:100-1.1, Title and citation, repealed.

**12:100-1.2 Scope**

This chapter shall apply to all employers, employees, and agencies subject to N.J.S.A. 34:6A-25 et seq., New Jersey Public Employees Occupational Safety and Health Act.

Recodified from N.J.A.C. 12:100-1.4 by R.1998 d.574, effective December 7, 1998.

See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

Former N.J.A.C. 12:100-1.2, Authority, repealed.

**Case Notes**

OSHA standards adopted in New Jersey could be applicable to scaffold collapse incident or recognized as prevailing safety standards in community. *Sanna v. National Sponge Co.*, 209 N.J.Super. 60, 506 A.2d 1258 (App.Div.1986).

**12:100-1.3 Documents referred to by reference**

The availability of standards and publications referred to in this chapter is explained in N.J.A.C. 12:100-17.

“Act” means the New Jersey Public Employees Occupational Safety and Health Act, N.J.S.A. 34:6A-25 et seq.

“Approved” means acceptable to the Commissioner of Labor.

“CFR” means Code of Federal Regulations.

“Commissioner” means the Commissioner of Labor or his or her designee.

“Division of Public Safety and Occupational Safety and Health” means the Division of Public Safety and Occupational Safety and Health of the Department of Labor, PO Box 386, Trenton, New Jersey 08625-0386.

“Employee” means any public employee, any person holding a position by appointment or employment in the service of an “employer” as that term is used in the Act and shall include any individual whose work has ceased as a consequence of, or in connection with, any administrative or judicial action instituted under the Act; provided, however, that elected officials, members of boards and commissions and managerial executives as defined in the New Jersey Employer-Employee Relations Act, N.J.S.A. 34:13A-1 et seq. shall be excluded from the coverage of the Act.

“Employer” means public employer and shall include any person acting directly on behalf of, or with the knowledge and ratification of:

1. The State, or any department, division, bureau, board, council, agency or authority of the State, except any bi-state agency; or
2. Any county, municipality, or any department, division, bureau, board, council, agency or authority of any county or municipality, or of any school district or special purposes district created pursuant to law.

“N.J.A.C.” means New Jersey Administrative Code.

“N.J.S.A.” means New Jersey Statutes Annotated.

“Serious injury” means any injury which requires treatment beyond first aid.

“Shall” means a mandatory requirement.

Amended by R.1986 d.285, effective July 21, 1986.  
See: 18 N.J.R. 811(b), 18 N.J.R. 1479(b).

The definition for “CFR” has been amended.  
Amended by R.1987 d.439, effective November 2, 1987.  
See: 19 N.J.R. 1533(a), 19 N.J.R. 2060(b).

Deleted text from CFR “in effect on . . .”.  
Amended by R.1998 d.574, effective December 7, 1998.  
See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

Rewrote “Division of Workplace Standards” as “Division of Public Safety and Occupational Safety and Health”.

## SUBCHAPTER 3. ADMINISTRATION

### 12:100-3.1 Scope of subchapter

This subchapter shall apply to the administration of the safety and health standards mandated by this chapter.

### 12:100-3.2 Compliance

(a) Every employer shall comply with the provisions of this chapter.

(b) Every employee shall comply with the provisions of this chapter as they pertain to him or her.

(c) When an employer has provided personal protection equipment in accordance with this chapter, the employee shall utilize such equipment when the hazard for which the equipment was provided exists.

(d) Every employer shall provide a reasonable safeguard against any recognized hazard which could cause serious injury or death to the employees.

(e) Every employer shall take all prudent measures to comply with written recommendations made by the Commissioner or the Commissioner of Health and Senior Services to reduce the risk of exposure to unsafe or unhealthy conditions which have been shown to be detrimental to employee health and safety. This provision shall apply for hazards not specifically covered by a standard in this chapter or a standard referenced in this chapter.

Amended by R.1998 d.574, effective December 7, 1998.  
See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

In (e), deleted a reference to the Commissioner of Community Affairs.

### 12:100-3.3 Interface of state agencies

(a) The New Jersey Department of Labor shall inspect under the provisions of this chapter where the provisions relate to safety issues in accordance with N.J.S.A. 34:6A-35.

(b) The New Jersey Department of Health and Senior Services shall inspect under the provisions of this chapter where the provisions relate to health issues in accordance with N.J.S.A. 34:6A-38.

(c) The provisions of (a) and (b) above shall not be construed to diminish the primary responsibility of the Commissioner of Labor for administering and enforcing the State plan in accordance with N.J.S.A. 34:6A-29.

Amended by R.1998 d.574, effective December 7, 1998.  
See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

In (b), deleted a reference to N.J.S.A. 34:6A-37; deleted a former (c); and recodified former (d) as (c), and made an internal reference change.

## SUBCHAPTER 3A. ADOPTION OF STANDARDS

**12:100-3A.1 Adoption of standards in compliance with applicable Federal standards**

The Commissioner shall provide for the adoption of all applicable occupational health and safety standards, amendments or changes adopted or recognized by the Secretary under the authority of the Occupational Safety and Health Act of 1970. Whenever the United States Secretary of Labor adopts a standard pursuant to the provisions of the Occupational Safety and Health Act of 1970 (29 U.S.C. §§ 651 et seq.), the Commissioner shall publish that Federal standard within six months of Federal adoption in the New Jersey Register in accordance with the provisions of N.J.S.A. 52:14B-5 and, notwithstanding the provisions of N.J.S.A. 52:14B-4, that Federal standard shall be deemed to be duly adopted as a State rule upon its publication by the Commissioner.

**12:100-3A.2 Adoption of standards more stringent than Federal standards**

(a) The Commissioner shall not adopt any standard within the scope of the State Uniform Construction Code adopted pursuant to N.J.S.A. 52:27D-119 et seq., or the Uniform Fire Safety Code adopted pursuant to N.J.S.A. 52:27D-192 et seq., unless the standard is one adopted pursuant to N.J.A.C. 12:100-4. If the Commissioner of Community Affairs determines that a building or structural safety standard adopted by the Commissioner pursuant to N.J.A.C. 12:100-4 is more stringent than the applicable standards found in the State Uniform Construction Code or the Uniform Fire Safety Code, he or she shall adopt a rule incorporating the more stringent standard. If the Commissioner of Community Affairs determines that there is a difference between a provision of any new or existing standard adopted pursuant to N.J.A.C. 12:100-4 and a provision of the Uniform Construction Code or the Uniform Fire Safety Code, and he or she determines that the provision of the applicable code is as effective as the provision of the standard, he or she shall prepare and submit to the Commissioner an application for submission to the Secretary of Labor seeking the approval of that provision of the Uniform Construction Code or the Uniform Fire Safety Code as being as effective as the provision of the standard and the approval of the incorporation of the code provision into the State Plan.

(b) Where no Federal standards are applicable or where standards more stringent than the Federal standards are deemed advisable, the Commissioner shall, in consultation with the Commissioner of Health and Senior Services and the Commissioner of Community Affairs, and with the advice of the Public Employees' Occupational Safety and Health Advisory Board, provide for the development of State standards as may be necessary.

**12:100-3A.3 Adoption of emergency temporary standards**

The Commissioner shall provide for the adoption of all emergency temporary standards, amendments or changes adopted or recognized by the United States Secretary of Labor under the authority of the Occupational Safety and Health Act of 1970 (29 U.S.C. §§ 651 et seq.). The Commissioner shall publish that Federal standard within 30 days of Federal adoption in the New Jersey Register in accordance with the provisions of N.J.S.A. 52:14B-5 and, notwithstanding the provisions of N.J.S.A. 52:14B-4, that Federal standard shall be deemed to be duly adopted as a State regulation upon its publication by the Commissioner.

## SUBCHAPTER 4. GENERAL STANDARDS

**12:100-4.1 Scope of subchapter; "employer" defined**

(a) This subchapter shall apply to general industry safety and health standards adopted by reference.

(b) As used in this subchapter, the term employer shall mean public employer and shall not include any private employer performing under this subchapter on behalf of, or with the knowledge and ratification of, a public employer.

Amended by R.1993 d.184, effective May 3, 1993.

See: 25 N.J.R. 890(a), 25 N.J.R. 1882(a).

Revised heading; added (b).

**12:100-4.2 Adoption by reference**

(a) The standards contained in 29 CFR Part 1910, General Industry Standards, with amendments published in the Federal Register through April 23, 1998 and any subsequent amendments thereto, with certain exemptions noted in (b) below, are adopted upon publication in the New Jersey Register and are incorporated herein by reference as occupational safety and health standards for the protection of public employees engaged in general operations and shall include:

1. Subpart A—General;
2. Subpart B—Adoption and Extension of Established Federal Standards;
3. Subpart D—Walking-Working Surfaces;
4. Subpart E—Means of Egress;
5. Subpart F—Powered Platforms, Man Lifts, and Vehicle-Mounted Work Platforms;
6. Subpart G—Occupational Health and Environmental Control;
7. Subpart H—Hazardous Materials;
8. Subpart I—Personal Protective Equipment;
9. Subpart J—General Environmental Controls;

**12:100-6.2 Adoption by reference**

(a) The standards contained in 29 CFR Part 1928, Agriculture with the amendments published in the Federal Register through April 23, 1998 and any subsequent amendments thereto, are adopted upon publication in the New Jersey Register and are incorporated herein by reference as occupational safety and health standards and shall include:

1. Subpart B—Applicability of Standards;
2. Subpart C—Employee operating instruction;
3. Subpart D—Safety for Agricultural Equipment;
4. Subpart I—General Environmental Controls; and
5. Subpart M—Occupational Health.

(b) Only standards relating to employee safety and health (that is, substantive rules) are adopted by any incorporation by reference as prescribed in (a) above.

Amended by R.1987 d.439, effective November 2, 1987.

See: 19 N.J.R. 1533(a), 19 N.J.R. 2060(b).

Added text "in effect on July 21, 1986".

Amended by R.1988 d.260, effective June 6, 1988.

See: 20 N.J.R. 726(a), 20 N.J.R. 1232(a).

Changed date from July 21, 1986 to July 31, 1987 and added amendments published in the Federal Register.

Amended by R.1998 d.574, effective December 7, 1998.

See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

Rewrote (a).

**12:100-6.3 Compliance with referenced standards**

(a) The standards contained in N.J.A.C. 12:100-6.2 shall apply according to the provisions thereof.

(b) Each employer shall protect his or her employees by complying with the standards prescribed in N.J.A.C. 12:100-6.2.

Amended by R.1998 d.574, effective December 7, 1998.

See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

In (b), neutralized a gender reference.

## SUBCHAPTER 7. STANDARD FOR HAZARD COMMUNICATION

**Authority**

N.J.S.A. 34:6A-25 et seq.

**Source and Effective Date**

R.2004 d.183, effective May 3, 2004.

See: 36 N.J.R. 150(a), 36 N.J.R. 2244(a).

**Subchapter Historical Note**

Subchapter 7, Standard for Hazard Communication, was adopted as R.2004 d.183, effective May 3, 2004. See: Source and Effective Date.

**12:100-7.1 Purpose**

(a) The purpose of this subchapter is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets and employee training.

1. This occupational safety and health standard is intended to address comprehensively the issue of evaluating the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, and to preempt any legal requirements of a state, or political subdivision of this State, pertaining to this subject. Evaluating the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, may include, for example, but is not limited to, provisions for: developing and maintaining a written hazard communication program for the workplace, including lists of hazardous chemicals present; labeling of containers of chemicals in the workplace, as well as of containers of chemicals being shipped to other workplaces; preparation and distribution of material safety data sheets to employees and downstream employers, and development and implementation of employee training programs regarding hazards of chemicals and protective measures.

**12:100-7.2 Scope and application**

(a) This subchapter requires chemical manufacturers or importers to assess the hazards of chemicals which they produce or import, and all employers to provide information to their employees about the hazardous chemicals to which they are exposed, by means of a hazard communication program, labels and other forms of warning, material safety data sheets, and information and training. In addition, this subchapter requires distributors to transmit the required information to employers. Employers who do not produce or import chemicals need only focus on those parts of this rule that deal with establishing a workplace program and communicating information to their workers. Appendix E of this subchapter, incorporated herein by reference, is a general guide for such employers to help them determine their compliance obligations under these rules.

(b) This subchapter applies to any chemical which is known to be present in the workplace in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency.

(c) This subchapter applies to laboratories only as follows:

1. Employers shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced;

2. Employers shall maintain any material safety data sheets that are received with incoming shipments of hazardous chemicals, and ensure that they are readily accessible during each work shift to laboratory employees when they are in their work areas;

3. Employees shall ensure that laboratory employees are provided information and training in accordance with N.J.A.C. 12:100-7.8, except for the location and availability of the written hazard communication program under N.J.A.C. 12:100-7.8(b)3; and

4. Laboratory employers that ship hazardous chemicals are considered to be either a chemical manufacturer or a distributor under this rule. Thus, they must ensure that any containers of hazardous chemicals leaving the laboratory are labeled in accordance with N.J.A.C. 12:100-7.6(a), and that a material safety data sheet is provided to distributors and other employers in accordance with N.J.A.C. 12:100-7.7(f) and (g).

(d) In work operations where employees only handle chemicals in sealed containers, which are not opened under normal conditions of use (such as are found in marine cargo handling, warehousing, or retail sales), this subchapter applies to these operations only as follows:

1. Employers shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced;

2. Employers shall maintain copies of any material safety data sheets that are received with incoming shipments of the sealed containers of hazardous chemicals or shall obtain a material safety data sheet as soon as possible for sealed containers of hazardous chemicals received without a material safety data sheet if an employee requests the material data sheet and shall ensure that the material safety data sheets are readily accessible during each work shift to employees when they are in their work area(s); and

3. Employers shall ensure that employees are provided with information and training in accordance with N.J.A.C. 12:100-7.8 (except for the location and availability of the written hazard communication program under N.J.A.C. 12:100-7.8(b)3), to the extent necessary to protect them in the event of a spill or leak of a hazardous chemical from a sealed container.

(e) This subchapter does not require labeling of the following chemicals:

1. Any pesticides as such term is defined in the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §§ 136 et seq., when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency;

2. Any chemical substance or mixture as such terms are defined in the Toxic Substances Control Act, 15 U.S.C. §§ 2601 et seq., when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency;

3. Any food, food additive, color additive, drug, cosmetic, or medical or veterinary device or product, including materials intended for use as ingredients in such products (for example, flavors and fragrances), as such terms are defined in the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301 et seq., or the Virus-Serum-Toxin Act of 1913, 21 U.S.C. §§ 151 et seq., and regulations issued under those Acts, when they are subject to the labeling requirements under those Acts by either the Food and Drug Administration or the Department of Agriculture;

4. Any distilled spirits (beverage alcohols), wine, or malt beverage intended for nonindustrial use, as such terms are defined in the Federal Alcohol Administration Act, 27 U.S.C. §§ 201 et seq., and regulations issued under that Act, when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Bureau of Alcohol, Tobacco, and Firearms;

5. Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act, 15 U.S.C. §§ 2051 et seq., and Federal Hazardous Substances Act, 15 U.S.C. §§ 1261 et seq., respectively, when subject to a consumer product safety standard or labeling requirement of those Acts, or regulations issued under those Acts by the Consumer Product Safety Commission; and

6. Agricultural or vegetable seed treated with pesticides and labeled in accordance with the Federal Seed Act, 7 U.S.C. §§ 1551 et seq., and the labeling regulations issued under that Act by the Department of Agriculture.

(f) This subchapter does not apply to:

1. Any hazardous waste as such term is defined by the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. §§ 6901 et seq., when subject to regulations issued under that Act by the Environmental Protection Agency;

2. Any hazardous substance as such term is defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601 et seq., when the hazardous substance is the focus of remedial or removal actions being conducted under CERCLA in accordance with the Environmental Protection Agency regulations;

3. Tobacco or tobacco products;

4. Wood or wood products, including lumber which will not be processed, where the chemical manufacturer or importer can establish that the only hazard they pose to employees is the potential for flammability or combustibility. Wood or wood products, which have been treated with a hazardous chemical covered by this standard, and wood which may be subsequently sawed or cut, generating dust, are not exempted;

5. Articles, as the term is defined in N.J.A.C. 12:100-7.3;

“Identity” means any chemical or common name, which is indicated on the material safety data sheet (MSDS) for the chemical. The identity used shall permit cross-references to be made among the required list of hazardous chemicals, the label and the MSDS.

“Immediate use” means that the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

“Importer” means the first business with employees within the Customs Territory of the United States, which receives hazardous chemicals produced in other countries for the purpose of supplying them to distributors or employers within the United States.

“Label” means any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.

“Material safety data sheet (MSDS)” means written or printed material concerning a hazardous chemical, which is prepared in accordance with N.J.A.C. 12:100-7.7.

“Mixture” means any combination of two or more chemicals if the combination is not, in whole or in part, the result of a chemical reaction.

“Organic peroxide” means an organic compound that contains the bivalent-O-O-structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

“Oxidizer” means a chemical other than a blasting agent or explosive as defined in 29 CFR 1910.109(a), that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

“Physical hazard” means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

“Produce” means to manufacture, process, formulate, blend, extract, generate, emit, or repackage.

“Pyrophoric” means a chemical that will ignite spontaneously in air at a temperature of 130 degrees Fahrenheit (54.4 degrees Celsius) or below.

“Responsible party” means someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

“Right to Know Hazardous Substance List” includes the workplace hazardous substance list and the environmental hazardous substance list.

“Right to Know Survey” includes the workplace survey and environmental survey.

“Specific chemical identity” means the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

“Technically qualified person” means:

1. For training purposes, a person who is a registered nurse, a certified safety professional, or a certified industrial hygienist, or has a bachelor's degree or higher in industrial hygiene, environmental science, health education, chemistry, or a related field, and understands the health risks associated with exposure to hazardous substances;

2. For training purposes, a person who has completed at least 30 hours of hazardous materials training offered by the New Jersey State Safety Council, the New Jersey Department of Health and Senior Services, an accredited public or private educational institution, labor union, trade association, private organization or government agency, and understands the health risks associated with exposure to hazardous substances, and has at least one year of experience handling hazardous substances or working with hazardous substances. The 30-hour requirement may be met by the combination of one or more hazardous materials training courses; or

3. For purposes of teaching the recruit firefighting training course established by the New Jersey Department of Community Affairs, a person who has fulfilled the requirements of Firefighter Instructor Level I as certified by the Department of Community Affairs.

“Trade secret” means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. Appendix D of this subchapter, incorporated herein by reference, sets out the criteria to be used in evaluating trade secrets.

“Unstable (reactive)” means a chemical, which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure or temperature.

“Use” means to package, handle, react, emit, extract, generate as a byproduct, or transfer.

“Water-reactive” means a chemical that reacts with water to release a gas that is either flammable or presents a health hazard.

“Work area” means a room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

“Workplace” means an establishment, job site, or project, at one geographical location containing one or more work areas.

“Workplace Hazardous Substance List” means the list of hazardous substances developed by the New Jersey Department of Health and Senior Services pursuant to N.J.S.A. 34:5A-5. The Workplace Hazardous Substance List is incorporated into the Right to Know Hazardous Substance List.

“Workplace survey” means a written document, prepared by the New Jersey Department of Health and Senior Services and completed by a public employer pursuant to the Worker and Community Right to Know Act, on which the employer shall report each hazardous substance on the Right to Know Hazardous Substance List present at its facility. The workplace survey is incorporated into the Right to Know Survey.

#### 12:100-7.4 Hazard determination

(a) Chemical manufacturers and importers shall evaluate chemicals produced in their workplaces or imported by them to determine if they are hazardous. Employers are not required to evaluate chemicals unless they choose not to rely on the evaluation performed by the chemical manufacturer or importer for the chemical to satisfy this requirement.

(b) Chemical manufacturers, importers or employers evaluating chemicals shall identify and consider the available scientific evidence concerning such hazards. For health hazards, evidence which is statistically significant and which is based on at least one positive study conducted in accordance with established scientific principles is considered to be sufficient to establish a hazardous effect if the results of the study meet the definitions of health hazards in this section. Appendix A shall be consulted for the scope of health hazards covered, and Appendix B shall be consulted for the criteria to be followed with respect to the completeness of the evaluation, and the data to be reported.

(c) The chemical manufacturer, importer or employer evaluating chemicals shall treat the following sources as establishing that the chemicals listed in them are hazardous:

1. 29 CFR § 1910, subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA); or
2. “Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment,” American Conference of Governmental Industrial Hygienists (ACGIH) (2003 Edition). The chemical manufacturer, importer, or employer is still responsible for evaluating the hazards associated with the chemicals in these source lists in accordance with the requirements of this standard.

(d) Chemical manufacturers, importers and employers evaluating chemicals shall treat the following sources as establishing that a chemical is a carcinogen or potential carcinogen for hazard communication purposes: National Toxicology Program (NTP), “Annual Report on Carcinogens” (10th Edition); International Agency for Research on Cancer (IARC) “Monographs”; or 29 CFR § 1910, subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration.

1. The “Registry of Toxic Effects of Chemical Substances” published by the National Institute for Occupational Safety and Health indicates whether a chemical has been found by NTP or IARC to be a potential carcinogen.

(e) The chemical manufacturer, importer or employer shall determine the hazards of mixtures of chemicals as follows:

1. If a mixture has been tested as a whole to determine its hazards, the results of such testing shall be used to determine whether the mixture is hazardous;
2. If a mixture has not been tested as a whole to determine whether the mixture is a health hazard, the mixture shall be assumed to present the same health hazards as do the components which comprise one percent (by weight or volume) or greater of the mixture, except that the mixture shall be assumed to present a carcinogenic hazard if it contains a component in concentrations of 0.1 percent or greater which is considered to be a carcinogen under N.J.A.C. 12:100-7.4(d);
3. If a mixture has not been tested as a whole to determine whether the mixture is a physical hazard, the chemical manufacturer, importer, or employer may use whatever scientifically valid data is available to evaluate the physical hazard potential of the mixture; and
4. If the chemical manufacturer, importer, or employer has evidence to indicate that a component present in the mixture in concentrations of less than one percent (or in the case of carcinogens, less than 0.1 percent) could be released in concentrations which would exceed an established OSHA permissible exposure limit or ACGIH Threshold Limit Value, or could present a health risk to employees in those concentrations, the mixture shall be assumed to present the same hazard.

(f) Chemical manufacturers, importers, or employers evaluating chemicals shall describe in writing the procedures they use to determine the hazards of the chemical they evaluate. The written procedures are to be made available, upon request, to employees, their designated representatives, the Commissioner of Labor and/or Commissioner of Health and Senior Services and the Director. The written description may be incorporated into the written hazard communication program required under N.J.A.C. 12:100-7.5.

4. The names and job titles of all persons attending the training sessions.

(f) Training records shall be maintained for the duration of the employee's employment.

(g) Training records shall be available as follows:

1. The employer shall ensure that all training records required to be maintained by this standard shall be made available upon request to the Commissioner of Labor or the Commissioner of Health and Senior Services for examination and copying.

2. Employee training records required by this standard shall be provided upon request for examination and copying to employees, to employee representatives, to the Commissioner of Labor, and to the Commissioner of Health and Senior Services.

(h) Material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.

#### 12:100-7.9 Trade secrets

(a) The chemical manufacturer, importer, or employer may withhold the specific chemical identity, including the chemical name and other specific identification of a hazardous chemical, from the material safety data sheet, provided that:

1. The claim that the information withheld is a trade secret can be supported;

2. Information contained in the material safety data sheet concerning the properties and effects of the hazardous chemical is disclosed;

3. The material safety data sheet indicates that the specific chemical identity is being withheld as a trade secret; and

4. The specific chemical identity is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of this section.

(b) Where a treating physician or nurse determines that a medical emergency exists and the specific chemical identity of a hazardous chemical is necessary for emergency or first-aid treatment, the chemical manufacturer, importer, or employer shall immediately disclose the specific chemical identity of a trade secret chemical to that treating physician or nurse, regardless of the existence of a written statement of need or a confidentiality agreement. The chemical manufacturer, importer, or employer may require a written statement of need and confidentiality agreement, in accordance with the provisions of (c) and (d) below, as soon as circumstances permit.

(c) In non-emergency situations, a chemical manufacturer, importer, or employer shall, upon request, disclose a specific chemical identity, otherwise permitted to be withheld under (a) above, to a health professional (that is, physician, industrial hygienist, toxicologist, epidemiologist, or occupational health nurse) providing medical or other occupational health services to exposed employee(s), and to employees or designated representatives, if:

1. The request is in writing;

2. The request describes with reasonable detail one or more of the following occupational health needs for the information:

i. To assess the hazards of the chemicals to which employees will be exposed;

ii. To conduct or assess sampling of the workplace atmosphere to determine employee exposure levels;

iii. To conduct pre-assignment or periodic medical surveillance of exposed employees;

iv. To provide medical treatment to exposed employees;

v. To select or assess appropriate personal protective equipment for exposed employees;

vi. To design or assess engineering controls or other protective measures for exposed employees; and

vii. To conduct studies to determine the health effects of exposure.

3. The request explains in detail why the disclosure of the specific chemical identity is essential and that, in lieu thereof, the disclosure of the following information to the health professional, employee, or designated representative, would not satisfy the purposes described in (c)2 above:

i. The properties and effects of the chemical;

ii. Measures for controlling workers' exposure to the chemical;

iii. Methods of monitoring and analyzing worker exposure to the chemical; and

iv. Methods of diagnosing and treating harmful exposures to the chemical;

4. The request includes a description of the procedures to be used to maintain the confidentiality of the disclosed information; and

5. The health professional, and the employer or contractor of the services of the health professional (that is, downstream employer, labor organization, or individual employee), employee, or designated representative, agree in a written confidentiality agreement that the health professional, employee, or designated representative, will not use the trade secret information for any purpose other than the health need(s) asserted and agree not to

release the information under any circumstances other than to the U.S. Occupational Safety and Health Administration, as provided in (f) below, except as authorized by the terms of the agreement or by the chemical manufacturer, importer, or employer.

(d) The confidentiality agreement authorized by (c)4 above:

1. May restrict the use of the information to the health purposes indicated in the written statement of need;
2. May provide for appropriate legal remedies in the event of a breach of the agreement, including stipulation of a reasonable pre-estimate of likely damages; and
3. May not include requirements for the posting of a penalty bond.

(e) Nothing in this subchapter is meant to preclude the parties from pursuing non-contractual remedies to the extent permitted by law.

(f) If the health professional, employee, or designated representative receiving the trade secret information decides that there is a need to disclose it to OSHA, the chemical manufacturer, importer, or employer who provided the information shall be informed by the health professional, employee, or designated representative prior to, or at the same time as, such disclosure.

(g) If the chemical manufacturer, importer, or employer denies a written request for disclosure of a specific chemical identity, the denial must:

1. Be provided to the health professional, employee, or designated representative, within 30 days of the request;
2. Be in writing;
3. Include evidence to support the claim that the specific chemical identity is a trade secret;
4. State the specific reasons why the request is being denied; and
5. Explain in detail how alternative information may satisfy the specific medical or occupational health need without revealing the specific chemical identity.

(h) The health professional, employee, or designated representative whose request for information is denied under (c) above may refer the request and the written denial of the request to the Commissioner of Labor and/or Commissioner of Health and Senior Services for consideration.

(i) When a health professional, employee, or designated representative refers the denial to the Commissioner of Labor and/or the Commissioner of Health and Senior Services under (h) above, New Jersey Public Employees Occupational Safety and Health shall consider the evidence to determine if:

1. The chemical manufacturer, importer, or employer has supported the claim that the specific chemical identity is a trade secret;
2. The health professional, employee, or designated representative has supported the claim that there is a medical or occupational health need for the information; and
3. The health professional, employee or designated representative has demonstrated adequate means to protect the confidentiality.

(j) If the Commissioner of Labor and/or the Commissioner of Health and Senior Services determines that the specific chemical identity requested under (c) above is not a "bona fide" trade secret, or that it is a trade secret, but the requesting health professional, employee, or designated representative has a legitimate medical or occupational health need for the information, has executed a written confidentiality agreement, and has shown adequate means to protect the confidentiality of the information, the chemical manufacturer, importer, or employer will be subject to citation by the Commissioner of Labor.

(k) If a chemical manufacturer, importer, or employer demonstrates to the Commissioner of Labor and/or the Commissioner of Health and Senior Services that the execution of a confidentiality agreement would not provide sufficient protection against the potential harm from the unauthorized disclosure of a trade secret specific chemical identity, the Commissioner of Labor and/or the Commissioner of Health and Senior Services may issue such orders or impose such additional limitations or conditions upon the disclosure of the requested chemical information as may be appropriate to assure that the occupational health services are provided without an undue risk of harm to the chemical manufacturer, importer, or employer.

(l) If a citation for a failure to release specific chemical identity information is contested by the chemical manufacturer, importer, or employer, the matter will be adjudicated before the Occupational Safety and Health Review Commission in accordance with the Act's enforcement scheme and the applicable Commission rules of the procedure. In accordance with the Commission rules, when a chemical manufacturer, importer, or employer continues to withhold the information during the contest, the Administrative Law Judge may review the citation and supporting documentation "in camera" or issue appropriate orders to protect the confidentiality of such matters.

(m) Notwithstanding the existence of a trade secret claim, a chemical manufacturer, importer, or employer shall, upon request, disclose to the Commissioner of Labor and/or the Commissioner of Health and Senior Services any information which this subchapter requires the chemical manufacturer, importer, or employer to make available. Where there is a trade secret claim, such claim shall be made no later than at the time the information is provided to the Commissioner of Labor and/or the Commissioner of Health and Senior Services so that suitable determinations of trade secret status can be made and the necessary protections can be implemented.

(n) Nothing in this section shall be construed as requiring the disclosure under any circumstances of process or percentage of mixture information, which is a trade secret.

## APPENDIX A

### Health Hazard Definitions (Mandatory)

Although safety hazards related to the physical characteristics of a chemical can be objectively defined in terms of testing requirements (for example, flammability), health hazard definitions are less precise and more subjective. Health hazards may cause measurable changes in the body—such as decreased pulmonary function. These changes are generally indicated by the occurrence of signs and symptoms in the exposed employees such as shortness of breath, a nonmeasurable, subjective feeling. Employees exposed to such hazards must be apprised of both the change in body function and the signs and symptoms that may occur to signal that change.

The determination of occupational health hazards is complicated by the fact that many of the effects or signs and symptoms occur commonly in non-occupationally-exposed populations, so that effects of exposure are difficult to separate from normally occurring illnesses. Occasionally, a substance causes an effect that is rarely seen in the population at large, such as angiosarcomas caused by vinyl chloride exposure, thus making it easier to ascertain that the occupational exposure was the primary causative factor. More often, however, the effects are common, such as lung cancer. The situation is further complicated by the fact that most chemicals have not been adequately tested to determine their health hazard potential, and data do not exist to substantiate these effects.

There have been many attempts to categorize effects and to define them in various ways. Generally, the terms “acute” and “chronic” are used to delineate between effects on the basis of severity or duration. “Acute” effects usually occur rapidly as a result of short-term exposure, and are of short duration. “Chronic” effects generally occur as a result of long-term exposure, and are of long duration.

The acute effects referred to most frequently are those defined by the American National Standards Institute

(ANSI) standard for Precautionary Labeling of Hazardous Industrial Chemicals (Z129.1-1988)—irritation, corrosivity, sensitization and lethal dose. Although these are important health effects, they do not adequately cover the considerable range of acute effects, which may occur as a result of occupational exposure, such as, for example, narcosis.

Similarly, the term chronic effect is often used to cover only carcinogenicity, teratogenicity, and mutagenicity. These effects are obviously a concern in the workplace, but again, do not adequately cover the area of chronic effects, excluding, for example, blood dyscrasias (such as anemia), chronic bronchitis and liver atrophy.

The goal of defining precisely, in measurable terms, every possible health effect that may occur in the workplace as a result of chemical exposures cannot realistically be accomplished. This does not negate the need for employees to be informed of such effects and protected from them. Appendix B, which is also mandatory, outlines the principles and procedures of hazard assessment.

For purposes of this section, any chemicals, which meet any of the following definitions, as determined by the criteria set forth in Appendix B are health hazards. However, this is not intended to be an exclusive categorization scheme. If there are available scientific data that involve other animal species or test methods, they must also be evaluated to determine the applicability of the Hazard Communication Standard.

1. Carcinogen: A chemical is considered to be a carcinogen if:

(a) It has been evaluated by the International Agency for Research on Cancer (IARC), and found to be a carcinogen or potential carcinogen; or

(b) It is listed as a carcinogen or potential carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program (NTP); or

(c) It is regulated by OSHA as a carcinogen.

2. Corrosive: A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. For example, a chemical is considered to be corrosive if, when tested on the intact skin of albino rabbits by the method described by the United States Department of Transportation in Appendix A to 49 CFR 173, it destroys or changes irreversibly the structure of the tissue at the site of contact following an exposure period of four hours. This term shall not refer to action on inanimate surfaces.

3. Highly toxic: A chemical falling within any of the following categories:

(a) A chemical that has a median lethal dose (LD(50)) of 50 milligrams or less per kilogram of body weight when

administered orally to albino rats weighing between 200 and 300 grams each.

(b) A chemical that has a median lethal dose (LD(50)) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.

(c) A chemical that has a median lethal concentration (LC(50)) in air of 200 parts per million by volume or less of gas or vapor, or two milligrams per liter or less of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

4. Irritant: A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. A chemical is a skin irritant if, when tested on the intact skin of albino rabbits by the methods of 16 CFR 1500.41 for four hours exposure or by other appropriate techniques, it results in an empirical score of five or more. A chemical is an eye irritant if so determined under the procedure listed in 16 CFR 1500.42 or other appropriate techniques.

5. Sensitizer: A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.

6. Toxic: A chemical falling within any of the following categories:

(a) A chemical that has a median lethal dose (LD(50)) of more than 50 milligrams per kilogram but not more than 500 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.

(b) A chemical that has a median lethal dose (LD(50)) of more than 200 milligrams per kilogram but not more than 1,000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.

(c) A chemical that has a median lethal concentration (LC(50)) in air of more than 200 parts per million but not more than 2,000 parts per million by volume of gas or vapor, or more than two milligrams per liter but not more than 20 milligrams per liter of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

7. Target Organ Effects: The following is a target organ categorization of effects, which may occur, including examples of signs and symptoms and chemicals, which have been found to cause such effects. These examples are presented to illustrate the range and diversity of effects and hazards found in the workplace, and the broad scope employers must consider in this area, but are not intended to be all-inclusive.

(a) Hepatotoxins: Chemicals which produce liver damage.

Signs and Symptoms: Jaundice; liver enlargement.

Chemicals: Carbon tetrachloride; nitrosamines.

(b) Nephrotoxins: Chemicals which produce kidney damage.

Signs and Symptoms: Edema; proteinuria.

Chemicals: Halogenated hydrocarbons; uranium.

(c) Neurotoxins: Chemicals, which produce their primary toxic effects on the nervous system.

Signs and Symptoms: Narcosis; behavioral changes; decrease in motor functions.

Chemicals: Mercury; carbon disulfide.

(d) Agents, which act on the blood or hemato-poietic system: Decrease hemoglobin function; deprive the body tissues of oxygen.

Signs and Symptoms: Cyanosis; loss of consciousness.

Chemicals: Carbon monoxide; cyanides.

(e) Agents which damage the lung: Chemicals which irritate or damage pulmonary tissue.

Signs and Symptoms: Cough; tightness in chest; shortness of breath.

Chemicals: Silica; asbestos.

(f) Reproductive toxins: Chemicals which affect the reproductive capabilities including chromosomal damage (mutations) and effects on fetuses (teratogenesis).

Signs and Symptoms: Birth defects; sterility.

Chemicals: Lead; DBCP.

(g) Cutaneous hazards: Chemicals which affect the dermal layer of the body.

Signs and Symptoms: Defatting of the skin; rashes; irritation.

Chemicals: Ketones; chlorinated compounds.

(h) Eye hazards: Chemicals which affect the eye or visual capacity.

Signs and Symptoms: Conjunctivitis; corneal damage.

Chemicals: Organic solvents; acids.

## APPENDIX B

### Hazard Determination (Mandatory)

The quality of a hazard communication program is largely dependent upon the adequacy and accuracy of the hazard determination. The hazard determination requirement of this standard is performance-oriented. Chemical manufacturers, importers, and employers evaluating chemicals are not required to follow any specific methods for determining hazards, but they must be able to demonstrate that they have adequately ascertained the hazards of the chemicals produced or imported in accordance with the criteria set forth in this Appendix.

Hazard evaluation is a process, which relies heavily on the professional judgment of the evaluator, particularly in the area of chronic hazards. The performance-orientation of the hazard determination does not diminish the duty of the chemical manufacturer, importer or employer to conduct a thorough evaluation, examining all relevant data and producing a scientifically defensible evaluation. For purposes of this standard, the following criteria shall be used in making hazard determinations that meet the requirements of this standard.

1. Carcinogenicity: As described in N.J.A.C. 12:100-7.4(d) and subchapter Appendix A, a determination by the National Toxicology Program, the International Agency for Research on Cancer, or OSHA that a chemical is a carcinogen or potential carcinogen will be considered conclusive evidence for purposes of this section. In addition, however, all available scientific data on carcinogenicity must be evaluated in accordance with the provisions of this Appendix and the requirements of this subchapter.

2. Human data: Where available, epidemiological studies and case reports of adverse health effects shall be considered in the evaluation.

3. Animal data: Human evidence of health effects in exposed populations is generally not available for the majority of chemicals produced or used in the workplace. Therefore, the available results of toxicological testing in animal populations shall be used to predict the health effects that may be experienced by exposed workers. In particular, the definitions of certain acute hazards refer to specific animal testing results (see Appendix A).

4. Adequacy and reporting of data: The results of any studies which are designed and conducted according to established scientific principles, and which report statistically significant conclusions regarding the health effects of a

chemical, shall be a sufficient basis for a hazard determination and reported on any material safety data sheet. In vitro studies alone generally do not form the basis for a definitive finding of hazard under the Hazard Communication Standard since they have a positive or negative result rather than a statistically significant finding.

The chemical manufacturer, importer, or employer may also report the results of other scientifically valid studies, which tend to refute the findings of hazard.

## APPENDIX C

(RESERVED)

## APPENDIX D

### Definition of Trade Secret (Mandatory)

The following is a reprint of the "Restatement of Torts," Section 757, comment b (1939):

Definition of trade secret. A trade secret may consist of any formula, pattern, device or compilation of information which is used in one's business, and which gives the individual an opportunity to obtain an advantage over competitors who do not know or use it. It may be a formula for a chemical compound, a process of manufacturing, treating or preserving materials, a pattern for a machine or other device, or a list of customers. It differs from other secret information in a business (see § 759 of the Restatement of Torts which is not included in this Appendix) in that it is not simply information as to single or ephemeral events in the conduct of the business, as, for example, the amount or other terms of a secret bid for a contract or the salary of certain employees, or the security investments made or contemplated, or the date fixed for the announcement of a new policy or for bringing out a new model or the like. A trade secret is a process or device for continuous use in the operations of the business. Generally it relates to the production of goods, as, for example, a machine or formula for the production of an article. It may, however, relate to the sale of goods or to other operations in the business, such as a code for determining discounts, rebates or other concessions in a price list or a catalogue, or a list of specialized customers, or a method of bookkeeping or other office management.

Secrecy. The subject matter of a trade secret must be secret. Matters of public knowledge or of general knowledge in an industry cannot be appropriated by one as one's own secret. Neither can matters which are completely disclosed by the goods which one markets be imputed as one's own secret. Substantially, a trade secret is known only in the particular business in which it is used. It is not requisite that only the proprietor of the business knows it. The individual may, without losing his protection, communicate it to employees involved in its use. The individual may likewise communicate it to others pledged to secrecy. Others may also know of it independently, as, for example, when they

have discovered the process or formula by independent invention and are keeping it secret. Nevertheless, a substantial element of secrecy must exist, so that, except by the use of improper means, there would be difficulty in acquiring the information. An exact definition of a trade secret is not possible. Some factors to be considered in determining whether given information is one's trade secret are: (1) The extent to which the information is known outside of the individual's business; (2) the extent to which it is known by employees and others involved in the individual's business; (3) the extent of measures taken by the individual to guard the secrecy of the information; (4) the value of the information to the individual and the individual's competitors; (5) the amount of effort or money expended by the individual in developing the information; and (6) the ease of difficulty with which the information could be properly acquired or duplicated by others.

Novelty and prior art. A trade secret may be a device or process, which is patentable; but it need not be that. It may be a device or process, which is clearly anticipated in the prior art or one, which is merely a mechanical improvement that a good mechanic can make. Novelty and invention are not requisite for a trade secret as they are for patentability. These requirements are essential to patentability because a patent protects against licensed use of the patented device or process even by one who discovers it properly through independent research. The patent monopoly is a reward to the inventor. But such is not the case with a trade secret. Its protection is not based on a policy of rewarding or otherwise encouraging the development of secret processes or devices. The protection is merely against breach of faith and reprehensible means of learning another's secret. For this limited protection it is not appropriate to require also the kind of novelty and invention, which is a requisite of patentability. The nature of the secret is, however, an important factor in determining the kind of relief that is appropriate against one who is subject to liability under the rule stated in this section. Thus, if the secret consists of a device or process which is a novel invention, one who acquires the secret wrongfully is ordinarily enjoined from further use of it and is required to account for the profits derived from the individual's past use. If, on the other hand, the secret consists of mechanical improvements that a good mechanic can make without resorting to the secret, the wrongdoer's liability may be limited to damages, and an injunction against future use of the improvements made with the aid of the secret may be inappropriate.

## APPENDIX E

### Guidelines for Employer Compliance (Advisory)

The Hazard Communication Standard (HCS) is based on a simple concept—that employees have both a need and a right to know the hazards and identities of the chemicals they are exposed to when working. They also need to know what protective measures are available to prevent adverse effects from occurring. The HCS is designed to provide employees with the information they need.

Knowledge acquired under the HCS will help employers provide safer workplaces for their employees. When employers have information about the chemicals being used, they can take steps to reduce exposures, substitute less hazardous materials, and establish proper work practices. These efforts will help prevent the occurrence of work-related illnesses and injuries caused by chemicals.

The HCS addresses the issues of evaluating and communicating hazards to workers. Evaluation of chemical hazards involves a number of technical concepts, and is a process that requires the professional judgment of experienced experts. That is why the HCS is designed so that employers who simply use chemicals, rather than produce or import them, are not required to evaluate the hazards of those chemicals. Hazard determination is the responsibility of the producers and importers of the materials. Producers and importers of chemicals are then required to provide the hazard information to employers that purchase their products.

Employers that do not produce or import chemicals need only focus on those parts of the subchapter that deal with establishing a workplace program and communicating information to their workers. This Appendix is a general guide for such employers to help them determine what is required under the subchapter. It does not supplant or substitute for the regulatory provisions, but rather provides a simplified outline of the steps an average employer would follow to meet those requirements.

#### 1. Becoming Familiar With The Subchapter.

The HCS requires information to be prepared and transmitted regarding all hazardous chemicals. The HCS covers both physical hazards (such as flammability), and health hazards (such as irritation, lung damage, and cancer). Most chemicals used in the workplace have some hazard potential, and thus will be covered by the subchapter.

One difference between this subchapter and many others adopted by OSHA is that this one is performance-oriented. That means that you have the flexibility to adapt the subchapter to the needs of your workplace, rather than having to follow specific, rigid requirements. It also means that you have to exercise more judgment to implement an appropriate and effective program.

The standard's design is simple. Chemical manufacturers and importers must evaluate the hazards of the chemicals they produce or import. Using that information, they must then prepare labels for containers, and more detailed technical bulletins called Material Safety Data Sheets (MSDS).

Chemical manufacturers, importers, and distributors of hazardous chemicals are all required to provide the appropriate labels and material safety data sheets to the employers to which they ship the chemicals. The information is to be provided automatically. Every container of hazardous chemicals you receive must be labeled, tagged, or marked with the required information. Your suppliers must also send you a properly completed material safety data sheet (MSDS) at the time of the first shipment of the chemical, and with the next shipment after the MSDS is updated with new and significant information about the hazards.

You can rely on the information received from your suppliers. You have no independent duty to analyze the chemical or evaluate the hazards of it.

Employers that "use" hazardous chemicals must have a program to ensure the information is provided to exposed employees. "Use" means to package, handle, react, or transfer. This is an intentionally broad scope, and includes any situation where a chemical is present in such a way that employees may be exposed under normal conditions of use or in a foreseeable emergency.

The requirements of the subchapter that deal specifically with the hazard communication program are found in N.J.A.C. 12:100-7.5, Written hazard communication program; 7.6, Labels and other forms of warning; 7.7, Material safety data sheets; and 7.8, Employee information and training. The requirements of these sections should be the focus of your attention. Concentrate on becoming familiar with them, using N.J.A.C. 12:100-7.2, Scope and application, and 7.3, Definitions, as references when needed to help explain the provisions.

There are two types of work operations where the coverage of the rule is limited. These are laboratories and operations where chemicals are only handled in sealed containers (for example, a warehouse). The limited provisions for these workplaces can be found in N.J.A.C. 12:100-7.2, Scope and application. Basically, employers having these types of work operations need only keep labels on containers as they are received; maintain material safety data sheets that are received, and give employees access to them; and provide information and training for employees. Employers do not have to have a written hazard communication program and lists of chemicals for these types of operations.

The limited coverage of laboratories and sealed container operations addresses the obligation of an employer to the workers in the operations involved, and does not affect the employer's duties as a distributor of chemicals. For example, a distributor may have warehouse operations where employees would be protected under the limited sealed container provisions. In this situation, requirements for obtaining and maintaining MSDSs are limited to providing access to those received with containers while the substance is in the workplace, and requesting MSDSs when employees request ac-

cess for those not received with the containers. However, as a distributor of hazardous chemicals, that employer will still have responsibilities for providing MSDSs to downstream customers at the time of the first shipment and when the MSDS is updated. Therefore, although they may not be required for the employees in the work operation, the distributor may, nevertheless, have to have MSDSs to satisfy other requirements of the rule.

## 2. Identify Responsible Staff.

Hazard communication is going to be a continuing program in your facility. Compliance with the HCS is not a "one shot deal." In order to have a successful program, it will be necessary to assign responsibility for both the initial and ongoing activities that have to be undertaken to comply with the rule. In some cases, these activities may already be part of current job assignments. For example, site supervisors are frequently responsible for on-the-job training sessions. Early identification of the responsible employees, and involvement of them in the development of your plan of action, will result in a more effective program design. Evaluation of the effectiveness of your program will also be enhanced by involvement of affected employees.

For any safety and health program, success depends on commitment at every level of the organization. This is particularly true for hazard communication, where success requires a change in behavior. This will only occur if employers understand the program, and are committed to its success, and if employees are motivated by the people presenting the information to them.

## 3. Identify Hazardous Chemicals in the Workplace.

The standard requires a list of hazardous chemicals in the workplace as part of the written hazard communication program. The list will eventually serve as an inventory of everything for which an MSDS must be maintained. At this point, however, preparing the list will help you complete the rest of the program since it will give you some idea of the scope of the program required for compliance in your facility.

The best way to prepare a comprehensive list is to survey the workplace. Purchasing records may also help, and certainly employers should establish procedures to ensure that in the future purchasing procedures result in MSDSs being received before a material is used in the workplace.

The broadest possible perspective should be taken when doing the survey. Sometimes people think of "chemicals" as being only liquids in containers. The HCS covers chemicals in all physical forms—liquids, solids, gases, vapors, fumes, and mists—whether they are "contained" or not. The hazardous nature of the chemical and the potential for exposure are the factors, which determine whether a chemical is covered. If it is not hazardous, it is not covered. If there is no potential for exposure (for example, the chemical is

inextricably bound and cannot be released), the rule does not cover the chemical.

Look around. Identify chemicals in containers, including pipes, but also think about chemicals generated in the work operations. For example, welding fumes, dusts, and exhaust fumes are all sources of chemical exposures. Read labels provided by suppliers for hazard information. Make a list of all chemicals in the workplace that are potentially hazardous. For your own information and planning, you may also want to note on the list the location(s) of the products within the workplace, and an indication of the hazards as found on the label. This will help you as you prepare the rest of your program.

N.J.A.C. 12:100-7.2, Scope and application, includes exemptions for various chemicals or workplace situations. After compiling the complete list of chemicals, you should review N.J.A.C. 12:100-7.2 to determine if any of the items can be eliminated from the list because they are exempted materials. For example, food, drugs, and cosmetics brought into the workplace for employee consumption are exempt. So rubbing alcohol in the first aid kit would not be covered.

Once you have compiled as complete a list as possible of the potentially hazardous chemicals in the workplace, the next step is to determine if you have received material safety data sheets for all of them. Check your files against the inventory you have just compiled. If any are missing, contact your supplier and request one. It is a good idea to document these requests, either by copy of a letter or a note regarding telephone conversations. If you have MSDSs for chemicals that are not on your list, figure out why. Maybe you do not use the chemical anymore. Or maybe you missed it in your survey. Some suppliers do provide MSDSs for products that are not hazardous. These do not have to be maintained by you.

You should not allow employees to use any chemicals for which you have not received an MSDS. The MSDS provides information you need to ensure proper protective measures are implemented prior to exposure.

#### 4. Preparing and Implementing a Hazard Communication Program.

All workplaces where employees are exposed to hazardous chemicals must have a written plan, which describes how the standard will be implemented in that facility. Preparation of a plan is not just a paper exercise—all of the elements must be implemented in the workplace in order to be in compliance with the subchapter. See N.J.A.C. 12:100-7.5 for the specific requirements regarding a written hazard communication program. The only work operations which do not have to comply with the written plan requirements are laboratories and work operations where employees only handle chemicals in sealed containers. See N.J.A.C. 12:100-7.2, Scope and application, for the specific requirements for these two types of workplaces.

The plan does not have to be lengthy or complicated. It is intended to be a blueprint for implementation of your program—an assurance that all aspects of the requirements have been addressed.

Many trade associations and other professional groups have provided sample programs and other assistance materials to affected employers. These have been very helpful to many employers since they tend to be tailored to the particular industry involved. You may wish to investigate whether your industry trade groups have developed such materials.

Although such general guidance may be helpful, you must remember that the written program has to reflect what you are doing in your workplace. Therefore, if you use a generic program, it must be adapted to address the facility it covers. For example, the written plan must list the chemicals present at the site, indicate who is to be responsible for the various aspects of the program in your facility, and indicate where written materials will be made available to employees.

If the Department of Labor and/or the Department of Health and Senior Services inspects your workplace for compliance with the HCS, the compliance officer will ask to see your written plan at the outset of the inspection. In general, the following items will be considered in evaluating your program.

The written program must describe how the requirements for labels and other forms of warning, material safety data sheets, and employee information and training, are going to be met in your facility. The following discussion provides the type of information compliance officers will be looking for to decide whether these elements of the hazard communication program have been properly addressed:

##### A. Labels and Other Forms of Warning.

In-plant containers of hazardous chemicals must be labeled, tagged, or marked with the identity of the material and appropriate hazard warnings. Chemical manufacturers, importers, and distributors are required to ensure that every container of hazardous chemicals they ship is appropriately labeled with such information and with the name and address of the producer or other responsible party. Employers purchasing chemicals can rely on the labels provided by their suppliers. If the material is subsequently transferred by the employer from a labeled container to another container, the employer will have to label that container unless it is subject to the portable container exemption. See N.J.A.C. 12:100-7.6 for specific labeling requirements.

The primary information to be obtained from an OSHA-required label is an identity for the material, and appropriate hazard warnings. The identity is any term, which appears on the label, the MSDS, and the list of chemicals, and thus links these three sources of information. The identity used by the supplier may be a common or trade name ("Black Magic Formula"), or a chemical name (1,1,1-trichloroethane). The hazard warning is a brief statement of the hazardous effects of the chemical ("flammable, causes lung damage"). Labels frequently contain other information, such as precautionary measures ("do not use near open flame"), but this information is provided voluntarily and is not required by the subchapter. Labels must be legible, and prominently displayed. There are no specific requirements for size or color, or any specified text.

With these requirements in mind, the compliance officer will be looking for the following types of information to ensure that labeling will be properly implemented in your facility:

1. Designation of person(s) responsible for ensuring labeling of in-plant containers;
2. Designation of person(s) responsible for ensuring labeling of any shipped containers;
3. Description of labeling system(s) used;
4. Description of written alternatives to labeling of in-plant containers (if used); and
5. Procedures to review and update label information when necessary.

Employers that are purchasing and using hazardous chemicals—rather than producing or distributing them—will primarily be concerned with ensuring that every purchased container is labeled. If materials are transferred into other containers, the employer must ensure that these are labeled as well, unless they fall under the portable container exemption (N.J.A.C. 12:100-7.6). In terms of labeling systems, you can simply choose to use the labels provided by your suppliers on the containers. These will generally be verbal text labels, and do not usually include numerical rating systems or symbols that require special training. The most important thing to remember is that this is a continuing duty—all in-plant containers of hazardous chemicals must always be labeled. Therefore, it is important to designate someone to be responsible for ensuring that the labels are maintained as required on the containers in your facility, and that newly purchased materials are checked for labels prior to use.

#### B. Material Safety Data Sheets.

Chemical manufacturers and importers are required to obtain or develop a material safety data sheet (MSDS) for each hazardous chemical they produce or import. Distribu-

tors are responsible for ensuring that their customers are provided a copy of these MSDSs. Employers must have an MSDS for each hazardous chemical, which they use. Employers may rely on the information received from their suppliers. The specific requirements for material safety data sheets are in N.J.A.C. 12:100-7.7. There is no specified format for the MSDS under the rule, although there are specific information requirements. OSHA has developed a nonmandatory format, OSHA Form 174, which may be used by chemical manufacturers and importers to comply with the rule. The MSDS must be in English. You are entitled to receive from your supplier a data sheet that includes all of the information required under the rule. If you do not receive one automatically, you should request one. If you receive one that is obviously inadequate, with, for example, blank spaces that are not completed, you should request an appropriately completed one. If your request for a data sheet or for a corrected data sheet does not produce the information needed, you should contact the Department of Labor and/or the Department of Health and Senior Services for assistance in obtaining the MSDS.

The role of MSDSs under the subchapter is to provide detailed information on each hazardous chemical, including its potential hazardous effects, its physical and chemical characteristics, and recommendations for appropriate protective measures. This information should be useful to you as the employer responsible for designing protective programs, as well as to the workers. If you are not familiar with material safety data sheets and with chemical terminology, you may need to learn to use them yourself. A glossary of MSDS terms may be helpful in this regard. Generally speaking, most employers using hazardous chemicals will primarily be concerned with MSDS information regarding hazardous effects and recommended protective measures. Focus on the sections of the MSDS that are applicable to your situation.

MSDSs must be readily accessible to employees when they are in their work areas during their work shifts. This may be accomplished in many different ways. You must decide what is appropriate for your particular workplace. Some employers keep the MSDSs in a binder in a central location (for example, in the pick-up truck on a construction site). Others, particularly in workplaces with large numbers of chemicals, computerize the information and provide access through terminals. As long as employees can get the information when they need it, any approach may be used. The employees must have access to the MSDSs themselves—simply having a system where the information can be read to them over the phone is only permitted under the mobile worksite provision, N.J.A.C. 12:100-7.7(i), when employees must travel between workplaces during the shift. In this situation, they have access to the MSDSs prior to leaving the primary worksite, and when they return, so the telephone system is simply an emergency arrangement.

In order to ensure that you have a current MSDS for each chemical in the plant as required, and that employee access is provided, the compliance officers will be looking for the following types of information in your written program:

1. Designation of person(s) responsible for obtaining and maintaining the MSDSs;
2. How such sheets are to be maintained in the workplace (for example, in notebooks in the work area(s) or in a computer with terminal access), and how employees can obtain access to them when they are in their work area during the work shift;
3. Procedures to follow when the MSDS is not received at the time of the first shipment;
4. For producers, procedures to update the MSDS when new and significant health information is found; and
5. Description of alternatives to actual data sheets in the workplace, if used.

For employers using hazardous chemicals, the most important aspect of the written program in terms of MSDSs is to ensure that someone is responsible for obtaining and maintaining the MSDSs for every hazardous chemical in the workplace. The list of hazardous chemicals required to be maintained as part of the written program will serve as an inventory. As new chemicals are purchased, the list should be updated. Many companies have found it convenient to include on their purchase orders the name and address of the person designated in their company to receive MSDSs.

#### C. Employee Information and Training.

Each employee who may be "exposed" to hazardous chemicals when working must be provided information and trained prior to initial assignment to work with a hazardous chemical, and whenever the hazard changes. See N.J.A.C. 12:100-7.8 for specific requirements. Information and training may be done either by individual chemical, or by categories of hazards (such as flammability or carcinogenicity). If there are only a few chemicals in the workplace, then you may want to discuss each one individually. Where there are large numbers of chemicals, or the chemicals change frequently, you will probably want to train generally based on the hazard categories (for example, flammable liquids, corrosive materials, carcinogens). Employees will have access to the substance-specific information on the labels and MSDSs.

Information and training is a critical part of the hazard communication program. Information regarding hazards and protective measures are provided to workers through written labels and material safety data sheets. However, through effective information and training, workers will learn to read and understand such information, determine how it can be obtained and used in their own workplaces, and understand the risks of exposure to the chemicals in their workplaces as well as the ways to protect themselves. A properly conducted training program will ensure comprehensive and understanding. It is not sufficient to either just read material to the workers, or simply hand them material to read. You want to create a climate where workers feel free to ask questions. This will help you to ensure that the information is understood. You must always remember that the underlying purpose of the HCS is to reduce the incidence of chemical source illnesses and injuries. This will be accomplished by modifying behavior through the provision of hazard information and information about protective measures. If your program works, you and your workers will better understand the chemical hazards within the workplace. The procedures you establish regarding, for example, purchasing, storage, and handling of these chemicals will improve, and thereby reduce the risks posed to employees exposed to the chemical hazards involved. Furthermore, your workers' comprehension will also be increased, and proper work practices will be followed in your workplace.

If you are going to do the training yourself, you will have to understand the material and be prepared to motivate the workers to learn. This is not always an easy task, but the benefits are worth the effort. More information regarding appropriate training can be found in OSHA Publication No. 2254 which contains voluntary training guidelines prepared by OSHA's Training Institute. A copy of this document is available from OSHA's Publications Office at (202) 219-4667. In reviewing your written program with regard to information and training, the following items need to be considered:

1. Designation of person(s) responsible for conducting training;
2. Format of the program to be used (audiovisuals, classroom instruction, etc.);
3. Elements of the training program (should be consistent with the elements in N.J.A.C. 12:100-7.8); and
4. Procedure to train new employees at the time of their initial assignment to work with a hazardous chemical, and to train employees when a new hazard is introduced into the workplace.

The written program should provide enough details about the employer's plans in this area to assess whether or not a good faith effort is being made to train employees. The Department of Labor and/or the Department of Health and Senior Services does not expect that every worker will be able to recite all of the information about each chemical in the workplace. In general, the most important aspects of training under the HCS are to ensure that employees are aware that they are exposed to hazardous chemicals, that they know how to read and use labels and material safety data sheets, and that, as a consequence of learning this information, they are following the appropriate protective measures established by the employer. PEOSH compliance officers will be talking to employees to determine if they have received training, if they know they were exposed to hazardous chemicals, and if they know where to obtain substance-specific information on labels and MSDSs.

If you already have a training program, you may simply have to supplement it with whatever additional information is required under the HCS. For example, construction employers that are already in compliance with the construction training standard (29 CFR § 1926.21) will have little extra training to do.

An employer can provide employees information and training through whatever means are found appropriate and protective. Although there would always have to be some training on-site (such as informing employees of the location and availability of the written program and MSDSs), employee training may be satisfied in part by general training about the requirements of the HCS and about chemical hazards on the job which is provided by, for example, trade associations, unions, colleges, and professional schools. In addition, previous training, education and experience of a worker may relieve the employer of some of the burdens of informing and training that worker. Regardless of the method relied upon, however, the employer is always ultimately responsible for ensuring that employees are adequately trained. If the compliance officer finds that the training is deficient, the employer will be cited for the deficiency regardless of who actually provided the training on behalf of the employer.

#### D. Other Requirements

In addition to these items, compliance officers will also be asking the following questions in assessing the adequacy of the program:

Does a list of the hazardous chemicals exist in each work area or at a central location?

Are methods the employer will use to inform employees of the hazards of nonroutine tasks outlined?

Are employees informed of the hazards associated with chemicals contained in unlabeled pipes in their work areas?

On multi-employer work sites, has the employer provided other employers with information about labeling systems and precautionary measures where the other employers have employees exposed to the initial employer's chemicals?

Is the written program made available to employees and their designated representatives?

If your program adequately addresses the means of communicating information to employees in your workplace, and provides answers to the basic questions outlined above, it will be found to be in compliance with the rule.

#### 5. Checklist for Compliance.

The following checklist will help to ensure you are in compliance with the rule:

- Read and understood the requirements.
- Assigned responsibility for tasks.
- Prepared an inventory of chemicals.
- Ensured containers are labeled.
- Obtained MSDSs for each chemical.
- Prepared written program.
- Made MSDSs available to workers.
- Conducted training of workers.
- Established procedures to maintain current program.
- Established procedures to evaluate effectiveness.

#### 6. Further Assistance.

If you have a question regarding compliance with the Hazard Communication Standard, you should contact:

New Jersey Department of Health and Senior Services

Public Employees Occupational Safety and Health Program

PO Box 360

Trenton, New Jersey 08625-0360

(609) 984-1863

Fax: (609) 984-2779

[www.state.nj.us/health/eoh/peoshweb](http://www.state.nj.us/health/eoh/peoshweb)

e-mail: [peosh@doh.state.nj.us](mailto:peosh@doh.state.nj.us)

Or

New Jersey Department of Labor

Division of Public Safety and Occupational Safety and Health

PO Box 386

Trenton, New Jersey 08625-0386

(609) 292-7036

([www.state.nj.us/labor/lssc/lspesh.html](http://www.state.nj.us/labor/lssc/lspesh.html))

Free consultation services are also available to assist employers, and information regarding these services can be obtained by contacting the programs listed above.

## SUBCHAPTER 8. STANDARDS FOR INDOOR FIRING RANGES FOR PUBLIC EMPLOYEES

### 12:100-8.1 Scope

(a) This subchapter shall apply to the following:

1. The design considerations, work practices, and ammunition used at existing and new indoor firing ranges operated by public employers;
2. Public employees assigned to work at an indoor firing range; and
3. Public employers who operate indoor firing ranges and who are responsible for complying with the provisions of this standard.

### 12:100-8.2 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

“Bounce back” means the occasion when hard zinc bullets bounce off the surface of the bullet trap.

“Bullet trap” means the area of the firing range furthest from the shooting area which is equipped with plates to capture the expended bullets after firing.

“HEPA” means a high efficiency particulate absolute filter which is 99.97 percent efficient for 0.3 microns.

“Indoor firing range” means the room inside a building which contains the shooting booths and is used for the shooting of firearms.

Amended by R.1994 d.492, effective September 19, 1994.  
See: 26 N.J.R. 2776(a), 26 N.J.R. 3872(b).

### 12:100-8.3 Lead standard

The Lead Standard, Section 1910.1025 of 29 CFR Part 1910, adopted by reference at N.J.A.C. 12:100-4.2(a) 20, shall be applicable at indoor firing ranges.

Amended by R.1998 d.574, effective December 7, 1998.  
See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).  
Changed N.J.A.C. reference.

### 12:100-8.4 Ammunition

(a) The ammunition used in indoor firing ranges during practice sessions shall be zinc bullets or nylon jacketed or copper jacketed bullets. Service ammunition routinely used by the public employer may be used for qualification sessions.

(b) When selecting the type of ammunition to be used to comply with (a) above, consideration shall be given to a potential problem of “bounce back” of the much harder zinc bullet from the bullet trap in some ranges. Consideration shall be given to the potential eye hazard to shooters which may make the use of the zinc bullets unsafe unless changes are made in the bullet trap.

### 12:100-8.5 Ventilation system

(a) The minimum air velocity shall be 50 feet per minute at the firing line. An optimum air velocity should be 75 feet per minute at the firing line.

(b) Filtered and conditioned air shall be introduced behind the firing line to guarantee an evenly distributed flow of air through the shooting positions. Supplied air inlets should be placed approximately 15 feet behind the shooter's position.

(c) The entire range facility shall be maintained at a slightly negative pressure with respect to adjacent areas to prevent the escape of contaminants. Exhaust air shall exceed supplied air by at least 10 percent. For maximum efficiency, exhaust ducts should be located behind and at the apex of the bullet trap. An alternative location is to place the exhaust ducts on the side walls slightly in front of the apex of the bullet trap.

(d) A minimum down range conveying velocity of 35 feet per minute shall be maintained. When the 75 feet per minute rate is used, a minimum of 25 percent of the air should be exhausted 15 to 20 feet down range of shooting position and the remaining 75 percent at the bullet trap. When the 50 feet per minute rate is used, 100 percent of the air should be exhausted down range at the bullet trap.

(e) Each range shall have its own ventilation system to prevent the circulation of contaminated air to other areas of the building.

(f) The supply and exhaust systems shall be electrically interlocked, thereby eliminating an error in turning one system on and not the other. The system shall operate on one fan speed only.

Amended by R.1994 d.492, effective September 19, 1994.  
See: 26 N.J.R. 2776(a), 26 N.J.R. 3872(b).

(b) The organizational statement shall be available for inspection by the Commissioner of Labor and by the employees or their designated representative.

(c) Training and education requirements are as follows:

1. The employer shall provide training and education for all fire service members commensurate with those duties and functions that fire service members are expected to perform. Such training and education shall be provided to fire service members before they perform fire service emergency activities. Fire service leaders and training instructors shall be provided with training and education, which is more comprehensive than that provided to the general membership of the fire service.

2. The employer shall assure that training and education is conducted frequently enough to assure that each member of the fire service is able to perform the member's assigned duties and functions satisfactorily and in a safe manner so as not to endanger fire service members or others. All fire service members shall be provided with training at least annually. In addition, fire service members who are expected to perform interior structural fire fighting shall be provided with an education session or training at least quarterly.

3. The quality of the training and education program for fire service members shall be similar to those conducted by such fire training schools as the Maryland Fire and Rescue Institute; Iowa Fire Service Extension; West Virginia Fire Service Extension; Georgia Fire Academy; New York State Department, Fire Prevention and Control; Louisiana State University Firemen Training Program, or Washington State's Fire Service Training Commission for Vocational Education. (For example, for the oil refinery industry with its unique hazards, the training and education program for those fire service members shall be similar to those conducted by Texas A & M University, Reno Fire School, or the Delaware State Fire School.)

4. The employer shall inform fire service members about special hazards such as storage and use of flammable liquids and gases, toxic chemicals, radioactive sources and water reactive substances to which they may be exposed during fire and other emergencies. The fire service members shall also be advised of any changes that occur in relation to the special hazards. The employer shall develop and make available for inspection by fire service members written procedures that describe the actions to be taken in situations involving the special hazards and shall include these in the training and education program.

5. The employer shall provide each member of the fire service training in HAZMAT Operations Level I, Bloodborne Pathogens, Incident Management System Training Orientation (I-100), and where applicable, Confined Space Entry Rescue Operations, Trench Rescue Operations and High Angle and Technical Rescue Tech-

niques. All training shall be consistent with the applicable PEOSH Standard.

6. The employer shall comply with the Hazard Communications Standard, N.J.A.C. 12:100-7, and relevant parts of the New Jersey Worker and Community Right to Know Act.

Amended by R.2004 d.183, effective May 3, 2004.  
See: 36 N.J.R. 150(a), 36 N.J.R. 2244(a).  
Added (c).

#### 12:100-10.4 Personnel; limitations on ability to perform

(a) The employer shall assure that employees who are expected to do interior structural firefighting are physically capable of performing duties, which may be assigned to them during emergencies.

1. Prior to appointment as a structural firefighter, all individuals shall have successfully passed a medical evaluation, which meets the Medical Evaluation Protocol required under the Respiratory Protection Program Standard, 29 CFR 1910.134. Failure to pass said examination shall exclude the individual from serving as a structural firefighter.

(b) The employer shall assure that compliance with (a) above shall be accomplished in conformity with the provisions of the Americans with Disabilities Act of 1990.

Amended by R.2004 d.183, effective May 3, 2004.  
See: 36 N.J.R. 150(a), 36 N.J.R. 2244(a).  
Added (a)1.

#### 12:100-10.5 Protective clothing

(a) The employer shall provide, at no cost to the employee, and assure the use of, protective clothing which complies with this subchapter.

(b) Firefighters performing interior structural firefighting and overhaul shall be provided with, and required to wear, the equipment covered in this subchapter.

(c) The employer shall assure that:

1. Protective clothing protects the head, body and extremities, and consists of at least the following components: body protection, eye, face and head protection;

2. Protective clothing ordered or purchased after the effective date of this subchapter shall comply with this subchapter; and

3. Firefighters wear foot, leg and body protective clothing complying with this subchapter.

Amended by R.1994 d.492, effective September 19, 1994.  
See: 26 N.J.R. 2776(a), 26 N.J.R. 3872(b).

Amended by R.1998 d.574, effective December 7, 1998.  
See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

In (c), rewrote 3 and 4.  
Amended by R.2004 d.183, effective May 3, 2004.  
See: 36 N.J.R. 150(a), 36 N.J.R. 2244(a).

In (b), inserted “, and required to wear,” preceding “the equipment covered”; in (c), substituted “Firefighters” for “Career firefighters” in 3 and deleted 4.

#### 12:100-10.6 Protective clothing; foot and leg protection

(a) Foot and leg protection shall comply with this section for all firefighters.

1. Protective footwear shall comply with NFPA 1974-1987, Protective Footwear for Structural Firefighting.

Amended by R.1998 d.574, effective December 7, 1998.  
See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

Rewrote the section.

Amended by R.2004 d.183, effective May 3, 2004.  
See: 36 N.J.R. 150(a), 36 N.J.R. 2244(a).

In (a), rewrote the introductory paragraph and deleted 2.

#### 12:100-10.7 Protective clothing; body protection

(a) Body protection shall comply with this section for all firefighters.

(b) Body protection shall be achieved by the wearing of a fire resistive coat and bunker pants, both of which shall be at least equivalent to NFPA 1971-1986, Protective Clothing for Structural Firefighting, incorporated herein by reference. For career firefighters, body protection must be worn in combination with a station/work uniform or apparel complying with (c) below. If the employer issues or requires the wearing of uniforms for volunteer firefighters, the uniform must comply with (c) below.

(c) Station/work apparel shall be provided to the career firefighter as follows:

1. The performance, construction and testing of station/work uniforms shall be at least equivalent to NFPA 1975-1985, Station/Work Uniforms for Firefighters, incorporated herein by reference; or
2. Apparel issued to the firefighter must be of a non-meltable material, such as cotton.

Amended by R.1998 d.574, effective December 7, 1998.  
See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

In (a) and (c), deleted a January 4, 1995 deadline.

Amended by R.2004 d.183, effective May 3, 2004.  
See: 36 N.J.R. 150(a), 36 N.J.R. 2244(a).

Rewrote (a); in (b), added the last sentence.

#### 12:100-10.8 Protective clothing; hand protection

(a) Hand protection shall consist of protective gloves or a glove system which will provide protection against cuts, punctures and heat penetration.

(b) The performance, construction, and testing of gloves for structural firefighters shall be at least equivalent to NFPA 1973-1988, Gloves for Structural Fire Fighting incorporated herein by reference.

Amended by R.1994 d.492, effective September 19, 1994.  
See: 26 N.J.R. 2776(a), 26 N.J.R. 3872(b).

Amended by R.1998 d.574, effective December 7, 1998.

See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

In (b), substituted a reference to Glove for Structural Fire Fighting for a reference to Gloves for firefighters.

#### 12:100-10.9 Protective clothing; head, eye and face protection

(a) Head protection shall consist of a protective head device with ear flaps and chin strap which meet the performance, construction and testing requirements of 29 CFR Part 1910.156(e)(5) or NFPA 1972-1987, Helmets for Structural Fire Fighting.

(b) Full facepieces, helmets, goggles or hoods of breathing apparatus which comply with 29 CFR 1910.134 and N.J.A.C. 12:100-10.10 shall be deemed to comply with (a) above.

(c) A full protective hood shall be provided for the firefighter that meets the performance, construction, and testing requirements of NFPA 1971-1991, Protective Clothing for Structural Fire Fighting.

1. Firefighters shall be provided with a full protective hood provided that if the wearing of the hood interferes with the proper fit of the helmet, a full protective hood need not be provided until the helmet becomes unserviceable and is replaced.

Amended by R.1998 d.574, effective December 7, 1998.

See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

In (a), substituted a reference to NFPA 1972-1987, Helmets for Structural Fire Fighting for a reference to NFPA Standard 1972-1987 edition at the end; in (b), substituted “or hoods of” for “hoods or” following “helmets”; and added (c).

Amended by R.2004 d.183, effective May 3, 2004.

See: 36 N.J.R. 150(a), 36 N.J.R. 2244(a).

In (b), inserted “goggles” preceding “or hoods”; in (c), deleted “December 7, 1999,” in 1.

#### 12:100-10.10 Respiratory protection devices

(a) The employer shall ensure that respirators are provided to, and used by firefighters, and that the respirators meet the requirements of 29 CFR 1910.134 and this section.

(b) Approved self-contained breathing apparatus with a full-facepiece, or with approved helmet or hood configuration, shall be provided to, and worn by, firefighters as follows:

1. While engaged in interior structural firefighting;
2. While working in confined spaces where toxic products of combustion or an oxygen deficiency may be present;
3. During emergency situations involving toxic substances; and
4. During all phases of firefighting and overhaul.

(c) The employer shall assure that:

11. Appendix I to Part 1918—Cargo Gear Register and Certificates (Non-mandatory);

12. Appendix II to Part 1918—Tables for Selected Miscellaneous Auxilliary Gear (Mandatory);

13. Appendix III to Part 1918—The Mechanics of Conventional Cargo Gear (Non-mandatory);

14. Appendix IV to Part 1918—Special Cargo Gear and Container Spreader Test Requirements (Mandatory); and

15. Appendix V to Part 1918—Basic Elements of a First Aid Training Program (Non-mandatory).

(b) Only standards relating to employee safety and health (that is, substantive rules) are adopted by any incorporation by reference as prescribed in (a) above.

#### **12:100-16.3 Compliance with referenced standards**

(a) The standards contained in N.J.A.C. 12:100-16.2 shall apply according to the provisions thereof.

(b) Each employer shall protect his or her employees by complying with the standards prescribed in N.J.A.C. 12:100-16.2.

### SUBCHAPTER 17. GEAR CERTIFICATION

#### **12:100-17.1 Scope of subchapter**

This subchapter shall apply to standards adopted by reference for accreditation of persons for purposes of certifying vessels cargo gear and shore-based material handling devices and the duties of such persons.

#### **12:100-17.2 Adoption by reference**

(a) The standards contained in 29 CFR Part 1919, Gear Certification, with the amendments published in the Federal Register through November 18, 2009 and any subsequent amendments thereto, are adopted upon publication in the New Jersey Register and are incorporated herein by reference as occupational safety and health standards and shall include:

1. Subpart A—General Provisions;
2. Subpart B—Procedure Governing Accreditation;
3. Subpart C—Duties of Persons Accredited to Certify Vessels' Cargo Gear;
4. Subpart D—Certification of Vessels' Cargo Gear;
5. Subpart E—Certification of Vessels: Tests and Proof Loads; Heat Treatment; Competent Persons;
6. Subpart F—Accreditation to Certificate Shore-Based Equipment;

7. Subpart G—Duties of Persons Accredited to Certify Shore-Based Material Handling Devices; and

8. Subpart H—Certification of Shore-Based Material Handling Devices.

#### **12:100-17.3 Compliance with referenced standards**

(a) The standards contained in N.J.A.C. 12:100-17.2 shall apply according to the provisions thereof.

(b) Each employer shall protect his or her employees by complying with the standards prescribed in N.J.A.C. 12:100-17.2.

### SUBCHAPTER 18. WORKSHOPS/REHABILITATION FACILITIES

#### **12:100-18.1 Scope of subchapter**

This subchapter shall apply to workshops and rehabilitation facilities assisted by a grant pursuant to section 12 or section 13 of the Vocational Rehabilitation Act Amendments of 1965, 79 Stat. 1284, 1286.

#### **12:100-18.2 Adoption by reference**

(a) The standards contained in 29 CFR Part 1924, Safety Standards Applicable to Workshops and Rehabilitation Facilities Assisted by Grants, with the amendments published in the Federal Register through November 18, 2009 and any subsequent amendments thereto, are adopted upon publication in the New Jersey Register and are incorporated herein by reference as occupational safety and health standards.

(b) Only standards relating to employee safety and health (that is, substantive rules) are adopted by any incorporation by reference as prescribed in (a) above.

#### **12:100-18.3 Compliance with referenced standards**

(a) The standards contained in N.J.A.C. 12:100-18.2 shall apply according to the provisions thereof.

(b) Each employer shall protect his or her employees by complying with the standards prescribed in N.J.A.C. 12:100-18.2.

### SUBCHAPTER 19. STANDARDS AND PUBLICATIONS REFERRED TO IN THIS CHAPTER

#### **12:100-19.1 Documents referred to by reference**

(a) The full title and edition of each of the standards or publications referred to in this chapter are as follows:

1. ACGHI, Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment (2003 Edition);
2. 29 CFR Part 1910, General Industry Standards;
3. 29 CFR Part 1915, Occupational Safety and Health Standards for Shipyard Employment;
4. 29 CFR Part 1917, Marine Terminals;
5. 29 CFR Part 1918, Safety and Health Regulations for Longshoring;
6. 29 CFR Part 1919, Gear Certification;
7. 29 CFR Part 1924, Safety Standards Applicable to Workshops and Rehabilitation Facilities Assisted by Grants;
8. 29 CFR Part 1926, Construction Industry Standards;
9. 29 CFR Part 1928, Agriculture;
10. IARC, International Agency for Research on Cancer Monographs;
11. NFPA 1971-1986, Protective Clothing for Structural Fire Fighting;
12. NFPA 1972-1987, Helmets for Structural Fire Fighting;
13. NFPA 1973-1988, Gloves for Structural Fire Fighting;
14. NFPA 1974-1987, Protective Footwear for Structural Fire Fighting;
15. NFPA 1975-1985, Station/Work Uniforms for Fire Fighters;
16. NFPA 1981-1987, Open-Circuit Self-Contained Breathing Apparatus for Fire Fighters;
17. NFPA 1982-1988, Personal Alert Safety Systems (PASS) for Fire Fighters;
18. NFPA 1983-1985, Fire Service Life-Safety Rope, Harnesses, and Hardware;
19. NFPA 1901-1991, Pumper Fire Apparatus;
20. NFPA 1902-1991, Initial Attack Fire Apparatus;
21. NFPA 1903-1991, Mobile Water Supply Fire Apparatus;
22. NFPA 1904-1991, Aerial Ladder and Elevating Platform Fire Apparatus;
23. NFPA 1914-1991, Testing Fire Department Aerial Devices;

24. N.J.A.C. 5:23, Uniform Construction Code;
25. N.J.A.C. 7:26, Solid Waste Regulations;
26. N.J.S.A. 34:6A-25 et seq., New Jersey Public Employees Occupational Safety and Health Act;
27. N.J.S.A. 34:13A-1 et seq., Employer-Employee Relations Act; and
28. NTP, National Toxicology Program Annual Report on Carcinogens (10th Edition).

Amended by R.1993 d.28, effective January 4, 1993.

See: 24 N.J.R. 73(a), 25 N.J.R. 180(b).

Revised (a)2; added new (a)3; redesignated existing (a)3-8 as (a)4-9; added new (a)10-23; redesignated existing (a)9-13 as (a)24-28.

Amended by R.1994 d.492, effective September 19, 1994.

See: 26 N.J.R. 2776(a), 26 N.J.R. 3872(b).

Amended by R.1998 d.574, effective December 7, 1998.

See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

Rewrote (a).

Amended by R.2004 d.183, effective May 3, 2004.

See: 36 N.J.R. 150(a), 36 N.J.R. 2244(a).

In (a), rewrote 1, added a new 5 and recodified former 5 through 19 as 6 through 22, and added 23.

Recodified from N.J.A.C. 12:100-17.1 and amended by R.2009 d.391, effective December 21, 2009 (to expire June 6, 2010).

See: 41 N.J.R. 4830(a).

Added new (a)3 through (a)7; and recodified former (a)3 through (a)23 as (a)8 through (a)28.

#### 12:100-19.2 Availability of documents for inspection

A copy of each of the standards and publications referred to in this chapter is on file and may be inspected at the following Office of the Division of Public Safety and Occupational Safety and Health between the hours of 9:00 AM and 4:00 PM on normal working days:

New Jersey Department of Labor  
Division of Public Safety and Occupational Safety  
and Health  
225 East State Street  
Trenton, New Jersey

Amended by R.1998 d.574, effective December 7, 1998.

See: 30 N.J.R. 3368(a), 30 N.J.R. 4240(b).

Substituted references to the Division of Public Safety and Occupational Safety and Health for references to the Division of Workplace Standards throughout, and changed address.

Recodified from N.J.A.C. 12:100-17.2 by R.2009 d.391, effective December 21, 2009 (to expire June 6, 2010).

See: 41 N.J.R. 4830(a).

#### 12:100-19.3 Availability of documents from issuing organization

Copies of the standards and publications referred to in this chapter may be obtained from the organizations listed below. The abbreviations preceding these standards and publications have the following meaning, and are the organizations issuing the standards and publications listed in N.J.A.C. 12:100-19.1: