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Safety and Health Standards for Federal Supply Contracts

UNDER THE WALSH-HEALEY PUBLIC CONTRACTS ACT

AND FEDERAL SERVICE CONTRACTS UNDER THE McNAMARA-O'HARA SERVICE CONTRACT ACT

U.S. DEPARTMENT OF LABOR
Workplace Standards Administration

ALL LABOR DEPARTMENT SAFETY/ HEALTH RULES NOW APPLY TO SERVICE CONTRACTS

Effective January 22, 1970, all safety and health regulations adopted under the Walsh-Healey Public Contracts Act and the Longshoremen's and Harbor Workers' Compensation Act apply to contractors under the Service Contract Act as appropriate.

Subsection (c) of Section 1516.2 as published in the Federal Register of January 22, 1970 states:

(c) The safety and health standards published in 41 CFR Part 50-204 and in Parts 1501-1504 of this title are considered "applicable standards" whenever the working conditions or surroundings whereunder services are performed which are covered by the act result in exposure to the same hazards or risks to which such standards otherwise apply.

SEE COVER 3 FOR THE LATEST LIST OF BUREAU OF LABOR STANDARDS' REGIONAL OFFICES, ADDRESSES, AND STATES COVERED IN EACH REGION.

Amendments to these regulations published in the Federal Register through JANUARY 26, 1970 are included in this booklet.

Safety and Health Standards for Federal Supply Contracts

UNDER THE WALSH-HEALEY PUBLIC CONTRACTS ACT

AND FEDERAL SERVICE CONTRACTS UNDER THE McNAMARA-O'HARA SERVICE CONTRACT ACT

TITLE 41
PART 50-204
OF THE CODE OF FEDERAL REGULATIONS

U.S. DEPARTMENT OF LABOR
Workplace Standards Administration
BUREAU OF LABOR STANDARDS

Title 41—PUBLIC CONTRACTS AND PROPERTY MANAGEMENT

Chapter 50—Public Contracts,
Department of Labor

PART 50-201—GENERAL REGULATIONS

PART 50-204—SAFETY AND HEALTH STANDARDS FOR FEDERAL SUPPLY CONTRACTS

Safety and Health Standards

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SUBPART D—GASES, VAPORS, FUMES, DUSTS, AND MISTS

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50-204.65 Inspection of compressed gas cylinders.
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50-204.71 Safety relief devices for compressed gas containers.
50-204.72 Safe practices for welding and cutting on containers which have held combustibles.

SUBPART E—TRANSPORTATION SAFETY

50-204.75 Transportation safety.

AUTHORITY: The provisions of this Part 50-204 issued under secs. 1, 4, 49 Stat. 2036, 2038, as amended; 41 U.S.C. 35, 38; 5 U.S.C. 556.

SUBPART A—SCOPE AND APPLICATION

§ 50-204.1 Scope and Application.

(a) The Walsh-Healey Public Contracts Act requires that contracts entered into by any agency of the United States for the manufacture or furnishing of materials, supplies, articles, and equipment in any amount exceeding $10,000 must contain, among other provisions, a stipulation that "no part of such contract will be performed nor will any of the materials, supplies, articles, or equipment to be manufactured or furnished under said contract be manufactured or fabricated in any plants, factories, buildings, or surroundings or under working conditions which are unsanitary or hazardous or dangerous to the health and safety of employees engaged in the performance of said contract. Compliance with the safety, sanitary, and factory inspection laws of the State in which the work or part thereof is to be performed shall be prima-facie evidence of compliance with this subsection." (sec. 1(e), 49 Stat. 2036, 41 U.S.C. 35(e).) This Part 50-204 expresses the Secretary of Labor's interpretation and application of this provision with regard to certain particular working conditions. In addition, §§ 50-204.27, 50-204.30, 50-204.31, 50-204.32, 50-204.33, and 50-204.36 contain requirements concerning the instruction of personnel, notification of incidents, reports of exposures, and maintenance and disclosure of records.

(b) Except in the conduct of formal enforcement proceedings provided for in Part 50-203 of this chapter and as otherwise provided in this part, every investigator conducting investigations and every officer of the Department of Labor determining whether there are or have been violations of the safety and health requirements of the Walsh-Healey Public Contracts Act and of any contract subject thereto, and whether a settlement of the resulting issues should be made without resort to administrative or court litigation, shall treat a failure to comply with, or violation of, any of the safety and health measures contained in this Part 50-204 as resulting in working conditions which are "unsanitary or hazardous or dangerous to the health and safety of employees" within the meaning of section 1(e) of the Act and the contract stipulation it requires. Every such investigator or every such officer shall have technical competence in safety, industrial hygiene, or both as may be appropriate, in the matters under investigation or consideration.

(c) Whenever any applicable standard in this Part 50-204 is relied upon by the Department of Labor in a formal enforcement proceeding under section 5 of the Walsh-Healey Public Contracts Act to support a finding of violation of the safety and health provisions of the Act and of a contract subject thereto, any respondent in the proceeding shall have the right and shall be afforded the opportunity to challenge the legality, fairness or propriety of any such reliance.

(d) The standards expressed in this Part 50-204 are for application to ordinary employment situations; compliance with them shall not relieve anyone from the obligation to provide protection for the health and safety of his employees in unusual employment situations. Neither do such standards purport to describe all of the working conditions which are unsanitary or hazardous or dangerous to the health and safety of employees. Where such other working conditions may be found to be unsanitary or hazardous or dangerous to the health and safety of employees, professionally accepted safety and health practices will be used.

(e) Compliance with the standards expressed in this Part 50-204 is not intended, and shall not be deemed, to relieve anyone from any other obligation he may have to

protect the health and safety of his employees, arising from sources other than the Walsh-Healey Public Contracts Act, such as State, local law or collective bargaining agreement.

(f) Whenever this part adopts by reference standards, specifications and codes published and available elsewhere, it only serves to adopt the substantive, technical portions of such standards, specifications and codes.

§ 50-204.1a Variations.

(a) The safety and health standards expressed in this part are intended for the application of section 1(a) of the Walsh-Healey Public Contracts Act to ordinary employment situations. The Director of the Bureau of Labor Standards may apply variations from the provisions of this part in enforcing the Act whenever he finds that, under the particular facts and circumstances involved, the plants, factories, buildings, surroundings, or working conditions are not unsanitary or hazardous or dangerous to the health and safety of the employees involved. Interested persons may request such a variation by making application therefor to the Director, Bureau of Labor Standards, U.S. Department of Labor, Washington, D.C. 20210.

(b) The provisions of paragraph (a) of this section shall not apply to §§ 50-204.35 and 204.36 which contain separate and specific variations procedures.

(c) Requests for exceptions or exemptions from the safety and health standards required by the Walsh-Healey Public Contracts Act, as permitted under section 6 of the Act, are processed under § 50-201.601 of this chapter.

SUBPART B—GENERAL SAFETY AND HEALTH STANDARDS

§ 50-204.2 General safety and health standards; incorporation by reference.

(a) Every contractor shall protect the safety and health of his employees by complying with the applicable standards, specifications, and codes developed and published by the following organizations:

American National Standards Institute, Incorporated;
National Fire Protection Association;
American Society of Mechanical Engineers;
American Society for Testing and Materials;
United States Governmental Agencies, including by way of illustration the following publications of the indicated agencies:

(1) U.S. Department of Labor

Title 29 (CFR):
- Part 1501—Safety and Health Regulations for Ship Repairing.
- Part 1502—Safety and Health Regulations for Shipbuilding.
- Part 1503—Safety and Health Regulations for Shipbreaking.
- Part 1504—Safety and Health Regulations for Longshoring.

(2) U.S. Department of Interior, Bureau of Mines

(i) Safety Code for Bituminous Coal and Lignite Mines of the United States, Part I—Underground Mines, and Part II—Strip Mines.

(ii) Safety Code for Anthracite Mines of the United States, Part I—Underground Mines, and Part II—Strip Mines.

(iii) Safety Standards for Surface Auger Mining.

(iv) Respiratory Protective Devices Approved by the Bureau of Mines, Information Circular 8281.

(3) U.S. Department of Transportation, 49 CFR Parts 171-179, 390-397, and 14 CFR Part 103)

(4) U.S. Department of Health, Education, and Welfare, Public Health Service.

(i) Publication No. 24—Manual of Individual Water Supply Systems.

(ii) Publication No. 526—Manual of Septic-Tank Practices.

(iii) Publication No. 545—The Vending of Food and Beverages.

(iv) Publication No. 934—Food Service Sanitation Manual.

(v) Publication No. 956—Drinking Water Standards.

(vi) Publication No. 1183—A Sanitary Standard for Manufactured Ice.

(vii) Publication No. 1518—Working with Silver Solder.

(5) U.S. Department of Defense:

(i) AFM 127-100—Air Force—Explosives Safety Manual.

(ii) AMCR 385-224—Army Materiel Command—AMC Safety Manual.

(iii) NAVORD OPS—Navy—Ammunition Ashore, Handling, Stowing, and Shipping.

(6) U.S. Department of Agriculture, Respiratory Devices for Protection Against Certain Pesticides—ARS 33-76-2.

(b) Information as to the standards, specifications, and codes applicable to a particular contract or invitation for bids and as to the places where such documents and those incorporated by reference in other sections of this part may be obtained and is available at the Office of the Director of the Bureau of Labor Standards, U.S. Department of Labor, Railway Labor Building, Washington, D.C. 20210, and at any of the following regional offices of the Bureau:

1. North Atlantic Region, 341 Ninth Avenue, Room 920, New York, N.Y. 10001 (Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont, New Jersey and Puerto Rico).

2. Middle Atlantic Region, Room 410, Penn Square Building, Juniper and Filbert Streets, Philadelphia, Pa. 19107 (Delaware, District of Columbia, Maryland, North Carolina, Pennsylvania, Virginia, and West Virginia).

3. South Atlantic Region, 1371 Peachtree Street NE., Suite 723, Atlanta, Ga. 30309 (Alabama, Florida, Georgia, Mississippi, South Carolina, and Tennessee).

4. Great Lakes Region, 848 Federal Office Building, 219 South Dearborn Street, Chicago, Ill. 60604 (Illinois, Indiana, Kentucky, Michigan, Minnesota, Ohio, and Wisconsin).

5. Mid-Western Region, 1906 Federal Office Building, 911 Walnut Street, Kansas City, Mo. 64106 (Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming).

6. West Gulf Region, Room 601, Mayflower Building, 411 North Akard Street, Dallas, Tex. 75201 (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas).

7. Pacific Region, 10353 Federal Building, 450 Golden Gate Avenue, Box 36017, San Francisco, Calif. 94102 (Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Washington, and Guam).

(c) In applying the safety and health standards referred to in paragraph (a) of this section, the Secretary may add to, strengthen or otherwise modify any standards whenever he considers that the standards do not adequately protect the safety and health of employees as required by the Walsh-Healey Public Contracts Act.

§ 50-204.3 Material handling and storage.

(a) Where mechanical handling equipment is used, sufficient safe clearances shall be allowed for aisles, at loading docks, through doorways and wherever turns or passage must be made. Aisles and passageways shall be kept clear and in good repair, with no obstruction across or in aisles that could create a hazard. Permanent aisles and passageways shall be appropriately marked.

(b) Storage of material shall not create a hazard. Bags, containers, bundles, etc., stored in tiers shall be stacked, blocked, interlocked and limited in height so that they are stable and secure against sliding or collapse.

(c) Storage areas shall be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage. Vegetation control will be exercised when necessary.

(d) Proper drainage shall be provided.

(e) Clearance signs to warn of clearance limits shall be provided.

(f) Derail and/or bumper blocks shall be provided on spur railroad tracks where a rolling car could contact other cars being worked, enter a building, work or traffic area.

(g) Covers and/or guardrails shall be provided to protect personnel from the hazards of open pits, tanks, vats, ditches, etc.

§ 50-204.4 Tools and equipment.

Each employer shall be responsible for the safe condition of tools and equipment used by employees, including tools and equipment which may be furnished by employees.

§ 50-204.5 Machine guarding.

(a) One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those

created by point of operation, ingoing nip points, rotating parts, flying chips and sparks. Examples of guarding methods are — barrier guards, twohand tripping devices, electronic safety devices, etc.

(b) General requirements for machine guards. Guards shall be affixed to the machine where possible and secured elsewhere if for any reason attachment to the machine is not possible. The guard shall be such that it does not offer an accident hazard in itself.

(c) Point of Operation Guarding.

(1) Point of operation is the area on a machine where work is actually performed upon the material being processed.

(2) Where existing standards prepared by organizations listed in § 50-204.2 provide for point of operation guarding such standards shall prevail. Other types of machines for which there are no specific standards, and the operation exposes an employee to injury, the point of operation shall be guarded. The guarding device shall be so designed and constructed so as to prevent the operator from having any part of his body in the danger zone during the operating cycle.

(3) Special handtools for placing and removing material shall be such as to permit easy handling of material without the operator placing a hand in the danger zone. Such tools shall not be in lieu of other guarding required by this section, but can only be used to supplement protection provided.

(4) The following are some of the machines which usually require point of operation guarding:

Guillotine cutters.
Shears.
Alligator shears.
Power presses.
Milling machines.
Power saws.
Jointers.
Portable power tools.
Forming rolls and calenders.

(d) Revolving drums, barrels and containers shall be guarded by an enclosure which is interlocked with the drive mechanism, so that the barrel, drum or container cannot revolve unless the guard enclosure is in place.

(e) When the periphery of the blades of a fan is less than seven (7) feet above the floor or working level, the blades shall be guarded. The guard shall have openings no larger than one half (½) inch.

(f) Machines designed for a fixed location shall be securely anchored to prevent walking or moving.

§ 50-204.6 Medical services and first aid.

(a) The employer shall ensure the ready availability of medical personnel for advice and consultation on matters of plant health.

(b) In the absence of an infirmary, clinic or hospital in near proximity to the workplace which is used for the treatment of all injured employees, a person or persons shall be adequately trained to render first aid. First aid supplies approved by the consulting physician shall be readily available.

(c) Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

§ 50-204.7 Personal protective equipment.

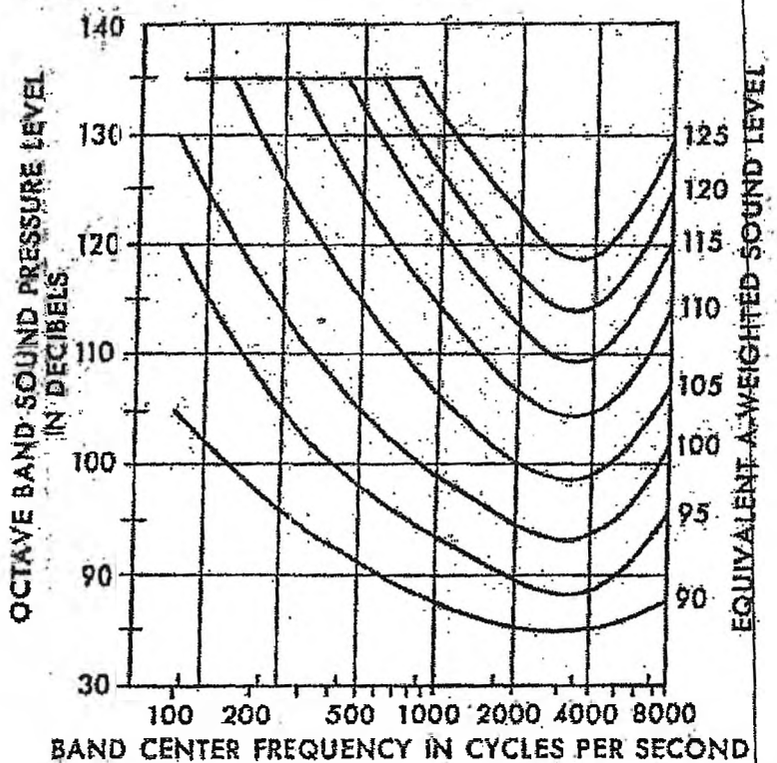
Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in function of any part of the body through absorption, inhalation or physical contact. Where employees provide their own protective equipment, the employer shall be responsible to assure its adequacy, including proper maintenance and sanitation of such equipment. All personal protective equipment shall be of safe design and construction for the work to be performed.

§ 50-204.8 Use of compressed air.

Compressed air shall not be used for cleaning purposes except where reduced to less than 30 p.s.i. and then only with effective chip guarding and personal protective equipment.

§ 50-204.10 Occupational noise exposure.

(a) Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in Table I of this section when measured on the A scale of a standard sound level meter at slow response. When noise levels are determined by octave band analysis, the equivalent A-weighted sound level may be determined as follows:



Equivalent sound level contours. Octave band sound pressure levels may be converted to the equivalent A-weighted sound level by plotting them on this graph and noting the A-weighted sound level corresponding to the point of highest penetration into the sound level contours. This equivalent A-weighted sound level, which may differ from the actual A-weighted sound level of the noise, is used to determine exposure limits from Table I.

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

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

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

TABLE I

Permissible Noise Exposures[1]

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

[1] When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each. If the sum of the following fractions: $C_1/T_1 + C_2/T_2 + \cdots + C_n/T_n$ exceeds unity, then, the mixed exposure should be considered to exceed the limit value. C_n indicates the total time of exposure at a specified noise level, and T_n indicates the total time of exposure permitted at that level.

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

SUBPART C—RADIATION STANDARDS

§ 50-204.20 Radiation—definitions.

As used in this subpart:

(a) "Radiation" includes alpha rays, beta rays, gamma rays, X-rays, neutrons, high-speed electrons, high-speed protons, and other atomic particles; but such term does not include sound or radio waves, or visible light, or infrared or ultraviolet light.

(b) "Radioactive material" means any material which emits, by spontaneous nuclear disintegration, corpuscular or electromagnetic emanations.

(c) "Restricted area" means any area access to which is controlled by the employer for purposes of protection of individuals from exposure to radiation or radioactive materials.

(d) "Unrestricted area" means any area access to which is not controlled by the employer for purposes of protection of individuals from exposure to radiation or radioactive materials.

(e) "Dose" means the quantity of ionizing radiation absorbed, per unit of mass, by the body or by any portion of the body. When the provisions in this subpart specify a dose during a period of time, the dose is the total quantity of radiation absorbed, per unit of mass, by the body or by any portion of the body during such period of time. Several different units of dose are in current use. Definitions of units used in this subpart are set forth in paragraphs (f) and (g) of this section.

(f) "Rad" means a measure of the dose of any ionizing radiation to body tissues in terms of the energy absorbed per unit of mass of the tissue. One rad is the dose corresponding to the absorption of 100 ergs per gram of tissue (1 millirad (mrad) = 0.001 rad).

(g) "Rem" means a measure of the dose of any ionizing radiation to body tissue in terms of its estimated biological effect relative to a dose of 1 roentgen (r) of X-rays (1 millirem (mrem) = 0.001 rem). The relation of the rem to other dose units depends upon the biological effect under consideration and upon the conditions for irradiation. Each of the following is considered to be equivalent to a dose of 1 rem:

(1) A dose of 1 rad due to X-, or gamma radiation;

(2) A dose of 1 rad due to X-, gamma, or beta radiation;

(3) A dose of 0.1 rad due to neutrons or high energy protons;

(4) A dose of 0.05 rad due to particles heavier than protons and with sufficient energy to reach the lens of the eye;

(5) If it is more convenient to measure the neutron flux, or equivalent, than to determine the neutron dose in rads, as provided in subparagraph (3) of this paragraph, 1 rem of neutron radiation may, for purposes of the provisions in this subpart be assumed to be equivalent to 14 million neutrons per square centimeter incident upon the body; or, if there is sufficient information to estimate with reasonable accuracy the approximate distribution in energy of the neutrons, the incident number of neutrons per square centimeter equivalent to 1 rem may be estimated from the following table:

Neutron Flux Dose Equivalents

Neutron energy (million electron volts [Mev])	Number of neutrons per square centimeter equivalent to a dose of 1 rem (neutrons/cm²)	Average flux to deliver 100 millirem in 40 hours (neutrons/cm² per sec.)
Thermal	970×10^6	670
0.0001	720×10^6	500
0.005	820×10^6	570
0.02	400×10^6	280
0.1	120×10^6	80
0.5	43×10^6	30
1.0	26×10^6	18
2.5	29×10^6	20
5.0	26×10^6	18
7.5	24×10^6	17
10	24×10^6	17
10 to 30	14×10^6	10

(h) For determining exposures to X- or gamma rays up to 3 Mev., the dose limits specified in this part may be assumed to be equivalent to the "air dose." For the purpose of this subpart, "air dose" means that the dose is measured by a properly calibrated appropriate instrument in air at or near the body surface in the region of the highest dosage rate.

§ 50-204.21 Exposure of individuals to radiation in restricted areas.

(a) Except as provided in paragraph (b) of this section, no employer shall possess, use, or transfer sources of ionizing radiation in such a manner as to cause any individual in a restricted area to receive in any period of one calendar quarter from sources in the employer's possession or control a dose in excess of the limits specified in the following table:

	Rems per calendar quarter
1. Whole body: Head and trunk; active blood-forming organs; lens of eyes; or gonads	1¼
2. Hands and forearms; feet and ankles	18¾
3. Skin of whole body	7½

(b) An employer may permit an individual in a restricted area to receive doses to the whole body greater than those permitted under paragraph (a) of this section, so long as:

(1) During any calendar quarter the dose to the whole body shall not exceed 3 rems; and

(2) The dose to the whole body, when added to the accumulated occupational dose to the whole body, shall not exceed 5 (N-18) rems, where "N" equals the individual's age in years at his last birthday; and

(3) The employer maintains adequate past and current exposure records which show that the addition of such a dose will not cause the individual to exceed the amount authorized in this paragraph. As used in this paragraph "Dose to the whole body" shall be deemed to include any dose to the whole body, gonad, active blood-forming organs, head and trunk, or lens of the eye.

(c) No employer shall permit any employee who is under 18 years of age to receive in any period of one calendar quarter a dose in excess of 10 percent of the limits specified in the table in paragraph (a) of this section.

(d) "Calendar quarter" means any 3-month period determined as follows:

(1) The first period of any year may begin on any date in January: *Provided*, That the second, third, and fourth periods accordingly begin on the same date in April, July, and October, respectively, and that the fourth period extends into January of the succeeding year, if necessary to complete a 3-month quarter. During the first year of use of this method of determination, the first period for that year shall also include any

additional days in January preceding the starting date for the first period; or

(2) The first period in a calendar year of 13 complete, consecutive calendar weeks; the second period in a calendar year of 13 complete, consecutive calendar weeks; the third period in a calendar year of 13 complete, consecutive calendar weeks; the fourth period in a calendar year of 13 complete, consecutive calendar weeks. If at the end of a calendar year there are any days not falling within a complete calendar week of that year, such days shall be included within the last complete calendar week of that year. If at the beginning of any calendar year there are days not falling within a complete calendar week of that year, such days shall be included within the last complete calendar week of the previous year; or

(3) The four periods in a calendar year may consist of the first 14 complete, consecutive calendar weeks; the next 12 complete, consecutive calendar weeks, the next 14 complete, consecutive calendar weeks, and the last 12 complete, consecutive calendar weeks. If at the end of a calendar year there are any days not falling within a complete calendar week of that year, such days shall be included (for purposes of this part) within the last complete calendar week of the year. If at the beginning of any calendar year there are days not falling within a complete calendar week of that year, such days shall be included (for purposes of this part) within the last complete week of the previous year.

(e) No employer shall change the method used by him to determine calendar quarters except at the beginning of a calendar year.

§ 50-204.22 Exposure to airborne radioactive material.

(a) No employer shall possess, use or transport radioactive material in such a manner as to cause any employee, within a restricted area, to be exposed to airborne radioactive material in an average concentration in excess of the limits specified in Table I of Appendix B to 10 CFR Part 20. The limits given in Table I are for exposure to the concentrations specified for 40 hours in any workweek of 7 consecutive days. In any such period where the number of hours of exposure is less than 40, the limits specified in the table may be increased proportionately. In any such period where the number of hours of exposure is greater than 40, the limits specified in the table shall be decreased proportionately.

(b) No employer shall possess, use, or transfer radioactive material in such a manner as to cause any individual within a restricted area, who is under 18 years of age to be exposed to airborne radioactive material in an average concentration in excess of the limits specified in Table II of Appendix B to 10 CFR Part 20. For purposes of this paragraph, concentrations may be averaged over periods not greater than 1 week.

(c) "Exposed" as used in this section means that the individual is present in an airborne concentration. No allowance shall be made for the use of protective clothing, or equipment, or particle size, except as authorized by the Director, Bureau of Labor Standards.

§ 50-204.23 Precautionary procedures and personnel monitoring.

(a) Every employer shall make such surveys as may be necessary for him to comply with the provisions in this subpart. "Survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions. When appropriate, such evaluation includes a physical survey of the location of materials and equipment, and measurements of levels of radiation or concentrations of radioactive material present.

(b) Every employer shall supply appropriate personnel monitoring equipment, such as film badges, pocket chambers, pocket dosimeters, or film rings, to, and shall require the use of such equipment by:

(1) Each employee who enters a restricted area under such circumstances that he receives, or is likely to receive, a dose in any calendar quarter in excess of 25 percent of the applicable value specified in paragraph (a) of § 50-204.21; and

(2) Each employee under 18 years of age who enters a restricted area under such circumstances that he receives, or is likely to receive, a dose in any calendar quarter in excess of 5 percent of the applicable value specified in paragraph (a) of § 50-204.21; and

(3) Each employee who enters a high radiation area.

(c) As used in this subpart:

(1) "Personnel monitoring equipment" means devices designed to be worn or carried by an individual for the purpose of measuring the dose received (e.g., film badges, pocket chambers, pocket dosimeters, film rings, etc.);

(2) "Radiation area" means any area, accessible to personnel, in which there exists radiation at such levels that a major portion of the body could receive in any one hour a dose in excess of 5 millirem, or in any 5 consecutive days a dose in excess of 100 millirem; and

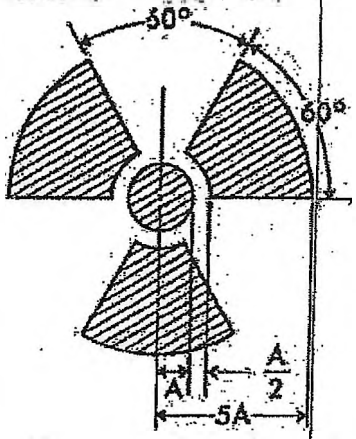
(3) "High radiation area" means any area, accessible to personnel, in which there exists radiation at such levels that a major portion of the body could receive in any one hour a dose in excess of 100 millirem.

§ 50-204.24 Caution signs, labels, and signals.

(a) *General.* (1) Symbols prescribed by this section shall use the conventional radiation caution colors (magenta or purple on yellow background). The symbol prescribed by this section is the conventional three-bladed design:

RADIATION SYMBOL

1. Cross-hatched area is to be magenta or purple.
2. Background is to be yellow.



(2) In addition to the contents of signs and labels prescribed in this section, employers may provide on or near such signs and labels any additional information which may be appropriate in aiding individuals to minimize exposure to radiation or to radioactive material.

(b) *Radiation areas.* Each radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words:

CAUTION[1]
RADIATION AREA

(c) *High radiation area.* (1) Each high radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words:

CAUTION[1]
HIGH RADIATION AREA

(2) Each high radiation area shall be equipped with a control device which shall either cause the level of radiation to be reduced below that at which an individual might receive a dose of 100 millirems in 1 hour upon entry into the area or shall energize a conspicuous visible or audible alarm signal in such a manner that the individual entering and the employer or a supervisor of the activity are made aware of the entry. In the case of a high radiation area established for a period of 30 days or less, such control device is not required.

(d) *Airborne radioactivity area.* (1) As used in the provisions of this subpart, "airborne radioactivity area" means (i) any room, enclosure, or operating area in which airborne radioactive materials, composed wholly or partly of radioactive material, exist in concentrations in excess of the amounts specified in column 1 of Table I of Appendix B to 10 CFR Part 20 or (ii) any room, enclosure, or operating area in which airborne

[1] Or "Danger."

radioactive materials exist in concentrations which, averaged over the number of hours in any week during which individuals are in the area, exceed 25 percent of the amounts specified in column 1 of the described Table 1.

(2) Each airborne radioactivity area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words:

CAUTION[3]
AIRBORNE RADIOACTIVITY AREA

(c) *Additional requirements.* (1) Each area or room in which radioactive material is used or stored and which contains any radioactive material (other than natural uranium or thorium) in any amount exceeding 10 times the quantity of such material specified in Appendix C to 10 CFR Part 20 shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words:

CAUTION[3]
RADIOACTIVE MATERIALS

(2) Each area or room in which natural uranium or thorium is used or stored in an amount exceeding 100 times the quantity specified in Appendix C to 10 CFR Part 20 shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words:

CAUTION[3]
RADIOACTIVE MATERIALS

(d) *Containers.* (1) Each container in which is transported, stored, or used a quantity of any radioactive material (other than natural uranium or thorium) greater than the quantity of such material specified in Appendix C to 10 CFR Part 20 shall bear a durable, clearly visible label bearing the radiation caution symbol and the words:

CAUTION[3]
RADIOACTIVE MATERIALS

(2) Each container in which natural uranium or thorium is transported, stored, or used in a quantity greater than 10 times the quantity specified in Appendix C to 10 CFR Part 20 shall bear a durable, clearly visible label bearing the radiation caution symbol and the words:

CAUTION[3]
RADIOACTIVE MATERIALS

(3) Notwithstanding the provisions of subparagraphs (1) and (2) of this paragraph a label shall not be required:

(i) If the concentration of the material in the container does not exceed that specified in column 2 of the described Table 1, or

(ii) For laboratory containers, such as beakers, flasks, and test tubes, used transiently in laboratory procedures, when the user is present.

(4) Where containers are used for storage, the labels required in this paragraph shall state also the quantities and kinds of radioactive materials in the containers and the date of measurement of the quantities.

[3] Or "Danger."

§ 50-204.25 Exceptions from posting requirements.

Notwithstanding the provisions of § 50-204.24:

(a) A room or area is not required to be posted with a caution sign because of the presence of a sealed source, provided the radiation level 12 inches from the surface of the source container or housing does not exceed 5 millirem per hour.

(b) Rooms or other areas in on-site medical facilities are not required to be posted with caution signs because of the presence of patients containing radioactive material, provided that there are personnel in attendance who shall take the precautions necessary to prevent the exposure of any individual to radiation or radioactive material in excess of the limits established in the provisions of this subpart.

(c) Caution signs are not required to be posted at areas or rooms containing radioactive materials for periods of less than 8 hours: *Provided*, That (1) the materials are constantly attended during such periods by an individual who shall take the precautions necessary to prevent the exposure of any individual to radiation or radioactive materials in excess of the limits established in the provisions of this subpart; and (2) such area or room is subject to the employer's control.

§ 50-204.26 Exemptions for radioactive materials packaged for shipment.

Radioactive materials packaged and labeled in accordance with regulations of the Department of Transportation shall be exempt from the labeling and posting requirements during shipment, provided that the inside containers are labeled in accordance with the provisions of § 50-204.24.

§ 50-204.27 Instruction of personnel posting.

Employers regulated by the AEC shall be governed by "§ 20.205" (10 CFR Part 20) standards. Employers in a State named in § 50-204.34(c) shall be governed by the requirements of the laws and regulations of that State. All other employers shall be regulated by the following:

(a) All individuals working in or frequenting any portion of a radiation area shall be informed of the occurrence of radioactive materials or of radiation in such portions of the radiation area; shall be instructed in the safety problems associated with exposure to such materials or radiation and in precautions or devices to minimize exposure; shall be instructed in the applicable provisions of this subpart for the protection of employees from exposure to radiation or radioactive materials; and shall be advised of reports of radiation exposure which employees may request pursuant to the regulations in this part.

(d) Each employer to whom this subpart applies shall post a current copy of its provisions and a copy of the operating procedures applicable to the work under contract conspicuously in such locations as to ensure that employees working in or frequenting radiation areas will observe these documents on the way to and from their place of employment, or shall keep such documents available for examination by employees upon request.

§ 50-204.28 Storage of radioactive materials.

Radioactive materials stored in a nonradiation area shall be secured against unauthorized removal from the place of storage.

§ 50-204.29 Waste disposal.

No employer shall dispose of radioactive material except by transfer to an authorized recipient, or in a manner approved by the Atomic Energy Commission or a State named in § 50-204.34(c).

§ 50-204.30 Notification of incidents.

(a) *Immediate notification.* Each employer shall immediately notify the Regional Director of the appropriate Wage and Labor Standards Administration, Bureau of Labor Standards of the U.S. Department of Labor for employees not protected by AEC by means of 10 CFR Part 20, § 50-204.34(b) of this part, or the requirements of the laws and regulations of States named in § 50-204.34(c), by telephone or telegraph of any incident involving radiation which may have caused or threatens to cause:

(1) Exposure of the whole body of any individual to 25 rems or more of radiation; exposure of the skin of the whole body of any individual to 150 rems or more of radiation; or exposure of the feet, ankles, hands, or forearms of any individual to 375 rems or more of radiation; or

(2) The release of radioactive material in concentrations which, if averaged over a period of 24 hours, would exceed 5,000 times the limit specified for such materials in Table II of Appendix B to 10 CFR Part 20.

(3) A loss of 1 working week or more of the operation of any facilities affected; or

(4) Damage to property in excess of $100,000.

(b) *Twenty-four hour notification.* Each employer shall within 24 hours following its occurrence notify the Regional Director of the appropriate Wage and Labor Standards Administration, Bureau of Labor Standards of the U.S. Department of Labor, for employees not protected by AEC by means of 10 CFR Part 20, § 50-204.34(b) of this part, or the requirements of the laws and applicable regulations of States named in § 50-204.34(c), by telephone or telegraph of any incident involving radiation which may have caused or threatens to cause:

(1) Exposure of the whole body of any individual to 5 rems or more of radiation; exposure of the skin of the whole body of any individual to 30 rems or more of radiation; or exposure of the feet, ankles, hands, or forearms to 75 rems or more of radiation; or

(2) A loss of 1 day or more of the operation of any facilities; or

(3) Damage to property in excess of $10,000.

§ 50-204.31 Reports of overexposure and excessive levels and concentrations.

(a) In addition to any notification required by § 50-204.30 each employer shall make a report in writing within 30 days to the Regional Director of the appropriate Wage and Labor Standards Administration, Bureau of Labor Standards of the U.S. Department of Labor, for employees not protected by AEC by means of 10 CFR Part 20, or under section 50-204.34(b) of this part, or the requirements of the laws and regulations of States named in § 50-204.34(c), of each exposure of an individual to radiation or concentrations of radioactive material in excess of any applicable limit in this subpart. Each report required under this paragraph shall describe the extent of exposure of persons to radiation or to radioactive material; levels of radiation and concentrations of radioactive material involved; the cause of the exposure, levels of concentrations; and corrective steps taken or planned to assure against a recurrence.

(b) In any case where an employer is required pursuant to the provisions of this section to report to the U.S. Department of Labor any exposure of an individual to radiation or to concentrations of radioactive material, the employer shall also notify such individual of the nature and extent of exposure. Such notice shall be in writing and shall contain the following statement: "You should preserve this report for future reference."

§ 50-204.32 Records.

(a) Every employer shall maintain records of the radiation exposure of all employees for whom personnel monitoring is required under § 50-204.23 and advise each of his employees of his individual exposure on at least an annual basis.

(b) Every employer shall maintain records in the same units used in tables in § 50-204.21 and Appendix B to 10 CFR Part 20.

§ 50-204.33 Disclosure to former employee of individual employee's record.

(a) At the request of a former employee an employer shall furnish to the employee a report of the employee's exposure to radiation as shown in records maintained by the employer pursuant to § 50-204.32(a). Such report shall be furnished within 30 days from the time the request is made, and shall cover each calendar quarter of the individual's employment involving exposure to radiation or such lesser period as may be requested by the employee. The report shall also include the results of any calculations and analysis of radioactive material deposited in the body of the employee. The report shall be in writing and contain the following statement: "You should preserve this report for future reference."

(b) The former employee's request should include appropriate identifying data, such as social security number and dates and locations of employment.

§ 50-204.34 AEC licensees—AEC contractors operating AEC plants and facilities—AEC agreement State licensees or registrants.

(a) Any employer who possesses or uses source material, byproduct material, or special nuclear material, as defined in the Atomic Energy Act of 1954, as amended, under a license issued by the Atomic Energy Commission and in accordance with the requirements of 10 CFR Part 20 shall be deemed to be in compliance with the requirements of this subpart with respect to such possession and use.

(b) AEC contractors operating AEC plants and facilities: Any employer who possesses or uses source material, byproduct material, special nuclear material, or other radiation sources under a contract with the Atomic Energy Commission for the operation of AEC plants and facilities and in accordance with the standards, procedures, and other requirements for radiation protection established by the Commission for such contract pursuant to the Atomic Energy Act of 1954 as amended (42 U.S.C. 2011 et seq.), shall be deemed to be in compliance with the requirements of this subpart with respect to such possession and use.

(c) AEC-agreement State licensees or registrants:

(1) *Atomic Energy Act Sources.* Any employer who possesses or uses source material, byproduct material, or special nuclear material, as defined in the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.), and has either registered such sources with, or is operating under a license issued by, a State which has an agreement in effect with the Atomic Energy Commission pursuant to section 274(b) (42 U.S.C. 2021(b)) of the Atomic Energy Act of 1954, as amended, and in accordance with the requirements of that State's laws and regulations shall be deemed to be in compliance with the radiation requirements of this part, insofar as his possession and use of such material is concerned, unless the Secretary of Labor, after conference with the Atomic Energy Commission, shall determine that the State's program for control of these radiation sources is incompatible with the requirements of this part. Such agreements currently are in effect only in the States of Alabama, Arkansas, California, Kansas, Kentucky, Florida, Mississippi, New Hampshire, New York, North Carolina, Texas, Tennessee, Oregon, Idaho, Arizona, Colorado, Louisiana, Nebraska, and Washington.

(2) *Other sources.* Any employer who possesses or uses radiation sources other than source material, byproduct material, or special nuclear material, as defined in the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.), and has either registered such sources with, or is operating under a license issued by a State which has an agreement in effect with the Atomic Energy Commission pursuant to section 274(b) (42 U.S.C. 2021(b)) of the Atomic Energy Act of 1954, as amended, and in accordance with the requirements of that State's laws and regulations shall be deemed to be in compliance with the radiation requirements of this part, insofar as his possession and use of such material is concerned, provided the State's program for control of these radiation sources is the subject of a currently effective determination by the Secretary of Labor that such program is compatible with the requirements of this part. Such determinations currently are in effect only in the States of Alabama, Arkansas, California, Kansas, Kentucky, Florida, Mississippi, New Hampshire, New York, North Carolina, Texas, Tennessee, Oregon, Idaho, Arizona, Colorado, Louisiana, Nebraska, and Washington.

§ 50-204.35 Application for variations from radiation levels.

(a) In accordance with policy expressed in the Federal Radiation Council's memorandum concerning radiation protection guidance for Federal agencies (25 F.R. 4402), the Director, Bureau of Labor Standards may from time to time grant permission to employers to vary from the limitations contained in §§ 50-204.21 and 50-204.22 when the extent of variation is clearly specified and it is demonstrated to his satisfaction that (1) such variation is necessary to obtain a beneficial use of radiation or atomic energy, (2) such benefit is of sufficient value to warrant the variation, (3) employees will not be exposed to an undue hazard, and (4) appropriate actions will be taken to protect the health and safety of such employees.

(b) Applications for such variations should be filed with the Director, Bureau of Labor Standards, U.S. Department of Labor, Washington, D.C. 20210.

§ 50-204.36 Radiation standards for mining.

(a) For the purpose of this section, a "working level" is defined as any combination of radon daughters in 1 liter of air which will result in the ultimate emission of 1.3×10^5 million electron volts of potential alpha energy. The numerical value of the "working level" is derived from the alpha energy released by the total decay of short-lived radon daughter products in equilibrium with 100 pico-curies of radon 222 per liter of air. A working level month is defined as the exposure received by a worker breathing air at one working level concentration for 4⅓ weeks of 40 hours each.

(b) (1) Occupational exposure to radon daughters in mines shall be controlled so that no individual will receive an exposure of more than 2 working level months in any calendar quarter and no more than 4 working level months in any calendar year. Actual exposures shall be kept as far below these values as practicable.

(2) In enforcing this section, the Director of the Bureau of Labor Standards may at any stage approve variations in individual cases from the limitation set forth in subparagraph (1) of this paragraph to comply with the requirements of the act upon a showing to the satisfaction of the Director by an employer having a mine with conditions resulting in an exposure of more than 4 working level months but not more than 12 working level months in any 12 consecutive months that (i) under the particular facts and circumstances involved the working conditions of the employees so exposed are such that their health and safety are protected, and (ii) the employer has a bona fide plan to reduce the levels of exposure to those specified in subparagraph (1) of this paragraph as soon as practicable, but in no event later than January 1, 1971.

(3) Whenever a variation under subparagraph (2) of this paragraph is sought, the request therefor should be submitted in writing to the Director of the Bureau of Labor Standards, U.S. Department of Labor, Washington, D.C. 20210, within 90 days following the end of the calendar quarter or year, as the case may be.

(c) (1) For uranium mines, records of environmental concentrations in the occupied parts of the mine, and of the time spent in each area by each person involved in underground work shall be established and maintained. These records shall be in sufficient detail to permit calculations of the exposures, in units of working level months, of the individuals and shall be available for inspection by the Secretary of Labor or his authorized agents.

(2) For other than uranium mines and for surface workers in all mines, subparagraph (1) of this paragraph will be applicable: *Provided, however,* That if no environmental sample shows a concentration greater than 0.33 working level in any occupied part of the mine, the maintenance of individual occupancy records and the calculation of individual exposures will not be required.

(d) (1) At the request of an employee (or former employee) a report of the employee's exposure to radiation as shown in records maintained by the employer pursuant to paragraph (c) of this section, shall be furnished to him. The report shall be in writing and contain the following statement:

This report is furnished to you under the provisions of the U.S. Department of Labor, Radiation Safety and Health Standards (31 CFR 50-204.36). You should preserve this report for future reference.

(2) The former employee's request should include appropriate identifying data, such as social security number and dates and locations of employment.

SUBPART D—GASES, VAPORS, FUMES, DUSTS, AND MISTS

§ 50-204.50 Gases, vapors, fumes, dusts, and mists.

(a) Exposures by inhalation, ingestion, skin absorption, or contact to any material or substance (1) at a concentration above those specified in the "Threshold Limit Values of Airborne Contaminants for 1968" of the American Conference of Governmental Industrial Hygienists, except for the ANSI Standards listed in Table I of this section and except for the values of mineral dusts listed in Table II of this section, and (2) concentrations above those specified in Table I and II of this section, shall be avoided, or protective equipment shall be provided and used.

(b) To achieve compliance with paragraph (a), feasible administrative or engineering controls must first be determined and implemented in all cases. In cases where protective equipment, or protective equipment in addition to other measures is used as the method of protecting the employee, such protection must be approved for each specific application by a competent industrial hygienist or other technically qualified source.

TABLE I

	8-hour time weighted average
Toluene (Z37.12-1967)	200 p.p.m.
Formaldehyde (Z37.16-1967)	3 p.p.m.
Carbon tetrachloride (Z-37.17-1967)	10 p.p.m.
Trichloroethylene (Z37.19-1967)	100 p.p.m.
Tetrachloroethylene (Z37.22-1967)	100 p.p.m.
Hydrogen fluoride (Z37.28-1969)	3 p.p.m.
Fluoride dust as F (Z37.28-1969)	2.5 mg/M³
Carbon disulfide (Z37.3-1968)	20 p.p.m.
	Acceptable ceiling concentration
Hydrogen sulfide (Z37.2-1966)	20 p.p.m.

TABLE II
Mineral Dusts

Substance	Mppcf*	Mg/M³
Silica:		
Crystalline—		
Quartz (Respirable)	250/(%SiO₂+5)	10mg/M³/(%SiO₂+2)
Quartz (Total Dust)		30mg/M³/(%SiO₂+2)
Cristobalite: Use ½ the value calculated from the count or mass formulae for quartz.		
Tridymite: Use ½ the value calculated from the formulae for quartz.		
Amorphous, including natural diatomaceous earth	20	80mg/M³/%SiO₂
Tremolite	5	20mg/M³/%SiO₂
Silicates (less than 1% crystalline silica):		
Asbestos—12 fibers per milliliter greater than 5 microns in length or		
Mica	20	
Soapstone	20	
Talc	20	
Portland Cement	50	
Graphite (natural)	15	
Coal Dust (Respirable fraction less than 5% SiO_2)		2.4mg/M³ or 10mg/M³/%SiO₂+2
For more than 5% SiO_2		
Inert or Nuisance Dust:		
Respirable Fraction	15	5mg/M³
Total Dust	50	15mg/M³

NOTE: Conversion factors

mppcf×35.3=million particles per cubic meter
=particles per c.c.

* Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques.

† The percentage of crystalline silica in the formula is the amount determined from air-dust samples, except in those instances in which other methods have been shown to be applicable.

‡ As determined by the membrane filter method at 430 X phase contrast magnification.

= Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics:

Aerodynamic diameter (unit density sphere)	% passing selector
2	90
2.5	75
3.5	50
5.0	25
10	0

The measurements under this note refer to the use of an AEC instrument. If the respirable fraction of coal dust is determined with a MRE the figure corresponding to that of 2.4 Mg/M³ in the table for coal dust is 4.5 Mg/M³.

§ 50-204.65 Inspection of compressed gas cylinders.

Each contractor shall determine that compressed gas cylinders under his control are in a safe condition to the extent that this can be determined by visual inspection. Visual and other inspections shall be conducted as prescribed in the Hazardous Materials Regulations of the Department of Transportation (49 CFR Parts 171-179 and 14 CFR Part 103). Where those regulations are not applicable, visual and other inspections shall be conducted in accordance with Compressed Gas Association Pamphlets C-6-1968 and C-8-1962.

§ 50-204.66 Acetylene.

(a) The in-plant transfer, handling, storage, and utilization of acetylene in cylinders shall be in accordance with Compressed Gas Association Pamphlet G-1-1966.

(b) The piped systems for the in-plant transfer and distribution of acetylene shall be designed, installed, maintained, and operated in accordance with Compressed Gas Association Pamphlet G-1.3-1959.

(c) Plants for the generation of acetylene and the charging (filling) of acetylene cyl-

inders shall be designed, constructed, and tested in accordance with the standards prescribed in Compressed Gas Association Pamphlet G-1.4-1966.

§ 50-204.67 Oxygen.

The in-plant transfer, handling, storage, and utilization of oxygen as a liquid or a compressed gas shall be in accordance with Compressed Gas Association Pamphlet G-4-1962.

§ 50-204.68 Hydrogen.

The inplant transfer, handling, storage, and utilization of hydrogen shall be in accordance with Compressed Gas Association Pamphlets G-5.1-1961 and G-5.2-1966.

§ 50-204.69 Nitrous oxide.

The piped systems for the in-plant transfer and distribution of nitrous oxide shall be designed, installed, maintained, and operated in accordance with Compressed Gas Association Pamphlet G-8.1-1964.

§ 50-204.70 Compressed gases.

The in-plant handling, storage, and utilization of all compressed gases in cylinders, portable tanks, rail tankcars, or motor vehicle cargo tanks shall be in accordance with Compressed Gas Association Pamphlet P-1-1965.

§ 50-204.71 Safety relief devices for compressed gas containers.

Compressed gas cylinders, portable tanks, and cargo tanks shall have pressure relief devices installed and maintained in accordance with Compressed Gas Association Pamphlets S-1.1-1963 and 1965 addenda and S-1.2-1963.

§ 50-204.72 Safe practices for welding and cutting on containers which have held combustibles.

Welding or cutting, or both, on containers which have held flammable or combustible solids, liquids, or gases, or have contained substances which may produce flammable vapors or gases will not be attempted until the containers have been thoroughly cleaned, purged, or inerted in strict accordance with the rules and procedures embodied in American Welding Society Pamphlet A-6.0-65, edition of 1965.

SUBPART E—TRANSPORTATION SAFETY

§ 50-204.75 Transportation safety.

Any requirements of the U.S. Department of Transportation under 49 CFR Parts 171-179 and Parts 390-397 and 14 CFR Part 103 shall be applied to transportation under contracts which are subject to the Walsh-Healey Public Contracts Act. See also § 204.2(a) (3) of this part. When such requirements are not otherwise applicable, Chapters 10, 11, 12, and 14 of the Uniform Vehicle Code of the National Committee on Uniform Traffic Laws and Ordinances, 1952 edition, shall be applied whenever pertinent.

PART 50-201—GENERAL REGULATIONS

§ 50-201.502 Record of injuries.

(a) Every person who is or shall become a party to a Government contract which is subject to the provisions of the Walsh-Healey Public Contracts Act and the regulations thereunder, or who is performing or shall perform any part of such contract subject to the provisions of such act or regulations, shall maintain the records specified below which shall be available for inspection by authorized representatives of the Secretary of Labor:

(1) Records of all injuries to employees, including a brief description of the manner of occurrence and the date and duration of disability.

(2) Records of injury frequency rates, calculated annually on a calendar year basis commencing the first of January of each year, as defined in American National Standards Institute, Z16.1-1967 "Method of Recording and Measuring Work Injury Experience."

(3) Records of injury severity rates, calculated annually on a calendar year basis commencing the first of January of each year, as defined in American National Standards Institute Z16.1-1967 "Method of Recording and Measuring Work Injury Experience."

(b) The records required in paragraph (a) of this section shall be kept on file at least 3 years from the date of entry.

(c) Where records are kept on a fiscal or insurance year basis, they shall be accepted as being in compliance with subparagraphs (2) and (3) of paragraph (a) of this section.

(Sec. 4, 49 Stat. 2038; 41 U.S.C. 2038)

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(Secs. 1, 4, 49 Stat. 2036, 2038, as amended; 41 U.S.C. 35, 38)