

Title 29—Labor
CHAPTER XVII—OCCUPATIONAL SAFETY
AND HEALTH ADMINISTRATION, DE-
PARTMENT OF LABOR

PART 1910—OCCUPATIONAL SAFETY
AND HEALTH STANDARDS

Emergency Temporary Standard on Certain
Carcinogens

Pursuant to section 6(c) of the Wil-
liams-Steiger Occupational Safety and
Health Act of 1970 (29 U.S.C. 655) and
Secretary of Labor's Order No. 12-71 (38
FR 8754), part 1910 of title 29, Code of
Federal Regulations, is hereby amended
in the manner set forth below, in order
to provide an emergency temporary
standard dealing with the exposure of
employees to certain listed substances
that are known or suspected to be

Concern for the dangers inherent in
the occupational exposure to carcino-
genic substances was one of the reasons
for enactment of the act. See Senate Re-
port No. 91-1282, 91st Congress, 2d ses-
sion, 2 (1970).

Administrative attention was ad-
dressed to the problem about 1 year ago.
On May 22, 1972, the Deputy Assistant
Secretary of Labor for Occupational
Safety and Health requested informa-
tion from the Director of the National
Institute for Occupational Safety and
Health (NIOSH) on nine substances al-
leged to be carcinogens. As part of his
effort to gain the best available scien-
tific data, the Director published on
July 6, 1972, at 37 FR 13285, a request for
information concerning 15 substances.
The data, arguments, and conclusions re-
ceived by NIOSH were made available
to the Occupational Safety and Health
Administration.

The Office of Standards continued
its work on carcinogens in preparation
for making recommendations for a
standard under section 6 of the act.

On January 4, 1973, a petition for an
emergency temporary standard, sub-
mitted by the Oil, Chemical, and Atomic
Workers Union and Health Research
Group, was received and acknowledged
by the Department of Labor. The petition
contained relevant information on the
danger of exposure to 10 of the carcino-
gens listed in the standard.

On February 9, 1973, the Assistant
Secretary of Labor published in the *Fed-
eral Register* (38 FR 4037), a notice of
the receipt of the petition for issuance
of an emergency temporary standard,
and a request for information from in-
terested persons on the issues involved.

In response to the notice, more than
50 written comments were received, pro-
viding valuable additional information,
data, and materials concerning carcino-
gens.

On the basis of all the relevant infor-
mation before us, it is hereby found
that: (1) The 14 carcinogens listed in
the emergency temporary standard are
toxic and physically harmful; (2) that
exposure to any of the 14 substances
poses a grave danger to employees; (3)
that employees are presently being ex-
posed to the substances; and (4) that the

emergency temporary standard set forth
below is necessary to protect the employ-
ees from such exposure.

Pursuant to section 6(c) of the act, a
proceeding will commence shortly in ac-
cordance with section 6(b) of the act,
in which the emergency temporary
standard will serve as a proposed rule,
together with other subsidiary rules. As
soon as possible, a draft environmental
impact statement will be filed with the
Council on Environmental Quality, and
copies will be sent to other appropriate
Federal agencies for their comments. In
addition, a copy of the proposed rules
to be noticed under section 6(b) will be
sent to the Environmental Protection
Agency for its comments under section
309 of the Clean Air Act.

Part 1910 is amended by adding a new
§ 1910.93c to read as follows:

§ 1910.93c Carcinogens.

(a) Scope and application.—This sec-
tion applies to any activity in which a
carcinogen is manufactured, processed,
used, repackaged, released, handled, or
otherwise present in any manner.

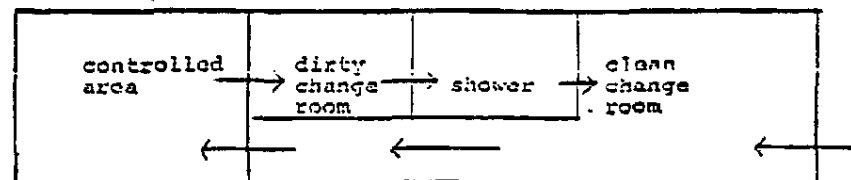
(b) Definitions.—(1) "Carcinogen"
means any of the substances listed be-
low, or compositions containing such
substances, but does not include com-
positions containing less than 1 percent
by weight of the listed carcinogens:

Com- pound No.	Chemicals	Chemical abstracts registry No.
1.....	2-Acetylaminofluorene.....	25-73
2.....	1-Aminodiphenyl.....	72671
3.....	Benidine (and its salts).....	72573
4.....	2,3-Dichlorobenzidine (and its salts).....	70911
5.....	4-Nitroethylmethanethiocarbamate.....	40117
6.....	alpha-Naphthylamine.....	13127
7.....	beta-Naphthylamine.....	9134
8.....	4-Nitrophenyl.....	9243
9.....	N-Nitrosodimethylaniline.....	2239
10.....	beta-Propionylurea.....	4573
11.....	bis-Chloromethyl ether.....	3281
12.....	Methyl Chloromethyl ether.....	10725
13.....	1,4-Methylenbis(2-chlorobenz- ene).....	10144
14.....	Phthalaniline.....	151664

(2) "Controlled area" means an area
to which access is restricted and con-
trolled by the employer.

(3) "Decontamination" means the re-
moval or chemical neutralization of a
carcinogen to a form that is either non-
toxic or not capable of easy absorption
into the body.

(4) "Present" includes manufactured,
processed, used, repackaged, released,
handled, or otherwise present.



(2) A controlled area may also be con-
nected with an uncontrolled area by
means of emergency exits which may
only be used in case of emergency, such
as fire.

(c) (1) Controlled areas.—(i) Any area
in which any carcinogen is present shall
be deemed a controlled area.

(ii) An area shall not be deemed a
controlled area if the presence of a car-
cinogen results only from a transship-
ment in sealed packages.

(2) Open-process vessels and open
containers.—Open-process vessels and
open containers of a carcinogen shall be
permitted only at container filling points
and at points where contents of contain-
ers are charged into process vessels, and
only to the extent necessary to permit
transfer of contents. Such transfers
shall be under continuous local exhaust
ventilation which shall prevent the dis-
persion of the carcinogen into any work
area. The transfer facilities shall have
provision to confine any spills to the area
served by the ventilation system.

(3) Toilet facilities and drinking foun-
tains.—No toilet facilities and no
drinking fountains shall be used inside
a controlled area.

(4) Food and beverage.—No food or
beverage shall be permitted within a con-
trolled area.

(5) Smoking.—No smoking or smoking
materials shall be allowed within a con-
trolled area.

(d) (1) Access to controlled areas.—
Except as provided in subparagraph (2)
of this paragraph, any controlled area
may be connected with an uncontrolled
area only by means of change rooms and
shower rooms so arranged that an em-
ployee, in order to enter or leave the
controlled area, must go through the
following procedures:

(i) In order to enter, an employee must
undress completely in a clean change
room outside the controlled area, and
put on clean protective clothing and
equipment; he may enter the controlled
area through an entrance designed to
prevent the escape of carcinogens from
the controlled area to the change room;

(ii) In order to leave a controlled area,
an employee must enter a separate dirty
change room where he must undress
completely and leave every item of cloth-
ing and equipment; then he must shower
in an adjacent room which he may enter
through an entrance designed to prevent
the escape of carcinogens from the dirty
change room to the shower room. There-
after, he must enter the clean change
room where his street clothes are in his
locker.

(iii) A physical layout which would
conform to this subparagraph is illus-
trated below:

(3) Appropriate instructions and signs
shall be posted to inform employees of
the procedures that must be followed in
entering and leaving a controlled area.

(4) The clean change room shall have

Definitions of the terms "number of employees" and "wet processes" have been added in order to facilitate the application of the paragraphs where the terms are used.

2. Paragraph (a)(4) of the proposal purported to regulate expectorating in workplaces. On the basis of several comments received in opposition to this proposed subparagraph, any reference to expectorating has been removed from the final standard. The general requirement under paragraph (a)(3)(i), Housekeeping, requiring clean places of employment, is sufficient to cover any problems arising from expectoration.

3. The proposed waste disposal standard would have required tight-fitting covers on waste receptacles. Several comments pointed out that the provision would restrict unnecessarily the design of waste receptacles, and that there are many operations where sanitary conditions can be maintained, but where tight-fitting covers would make operations impracticable. The adopted standard takes these comments into consideration, and does not require a tight-fitting cover if sanitary conditions can be maintained without one. The proposal also required such receptacles to be leakproof. The adopted standard recognizes that other receptacles can be used where a process so requires, as long as sanitary conditions can be maintained.

4. Proposed paragraph (a)(5), Vermin Control, would have required workplaces and personal service rooms to be constructed, equipped, and maintained so as to prevent entrance or harborage of rodents, insects, and other vermin. The proposal would also require institution and documentation of an extermination program where vermin were detected. Many comments asserted that it is impossible to make a workplace completely verminproof. The comments favored the text of the existing § 1910.141(a)(4) which requires verminproofing "so far as reasonably practicable." This text seems to be more realistic than the proposal and is accordingly incorporated in the final standard.

Comments were also received objecting to the recordkeeping requirements of paragraph (a)(6) as being too burdensome to employers, and unnecessary for the maintenance of an adequate vermin control program. It is decided that documentation of vermin control programs is not necessary to assure that a particular program is effective, and reference to such documentation is therefore deleted from the adopted standard.

5. Several comments were received on the proposals that drinking water be made available within 200 feet of any place where employees regularly work, and that toilet facilities be within 200 feet from where employees regularly work. Some comments stated that the distance an employee had to walk to a toilet or drinking facility was not related to occupational safety and health, and that the location of such facilities was merely a matter of convenience. Other comments suggested that the cost of compliance with this proposal would result in

severe economic hardship, in many cases with little or no benefit to employees. Other comments suggested figures other than 200 feet, ranging as high as 600 feet. Others suggested that the existing standard, which used the 200 feet as a guide rather than a requirement, should be retained. Other criticisms of the proposal were also offered, but the basic criticism running through all the relevant comments on the 200-foot requirement was to the effect that this distance was arbitrary. As a result of the comments, no fixed distance is prescribed concerning the proximity of toilet and drinking facilities located in the establishment to the locus of the workplace.

6. The uses of potable and nonpotable water were a source of many comments. The questions of whether nonpotable water could be used for washing any part of the person, as stated in the proposed revision, was the subject of much argument. There, the issue is whether some treated water which is not fit for drinking may be suitable for washing. Medical testimony was presented to the effect that water used in showering is inevitably ingested into the body, and that showering in nonpotable water had led to a great many dermatological and other medical problems. Other testimony was to the effect that properly treated nonpotable water was safe for bathing and washing, so long as precautions were in effect to insure that the bather did not drink the water. Some testimony was presented concerning different grades of water, and that some States had strict standards concerning the chemical and bacteriological regulating of water which was deemed suitable for washing, but not for drinking. There was also evidence indicating that a substantial number of employees are supplied with water subject only to minimal treatment, even when the water comes from heavily polluted sources.

It is not clear whether nonpotable water is safe for washing the body. The problem is made even more difficult because of the highly varied quality of nonpotable water systems. This uncertainty suggests that the basic protection afforded by the existing standard, requiring the use of potable water for washing, must be retained.

7. Comments were received with respect to the posting provisions proposed in paragraphs (b)(2)(i) and (iv). Several comments pointed out an apparent conflict between the two provisions in that the former required the posting to indicate for what purposes nonpotable water could not be used, while the latter required the posting to clearly indicate the specific uses of the nonpotable water. Other comments indicated that the posting requirements were excessively burdensome and expensive. Still other comments argued that other methods besides posting, such as color-coding, should be allowed as a means of advising employees that the water is not suitable for certain purposes.

It is important that there be some means of warning employees that certain water outlets have restricted use. The

adopted standard thus retains the requirement for posting, but also allows alternative means of warning the outlets. The conflict which was pointed out as existing in the proposed standard has been resolved by requiring the posting to indicate clearly the purposes for which such water is not to be used.

8. The proposed paragraph (b)(2)(ii) would forbid the existence of any cross-connection, open or potential, between any system carrying potable water and any system carrying nonpotable water. Proposed paragraph (b)(3)(iii) appeared to allow cross-connections, providing that backflow of nonpotable water into a potable water system was prevented. Several comments were addressed to this possible conflict, some of which advocated the deletion of the paragraph forbidding cross-connections. At the hearing, substantial testimony was presented on the subject of cross-connections, to the effect that where effective backflow preventive devices are in use, the danger paragraph (b)(2)(ii) addressed itself to would become obviated. Evidence was also introduced indicating a need for cross-connections in certain instances throughout industry. These comments have merit, and accordingly it is decided that the proposed prohibition of all cross-connections should not be a part of the adopted standard. The final rule simply states that potable and nonpotable systems must be constructed so that backflow and backsiphonage will be prevented.

9. Proposed § 1910.141(c), Toilet facilities, dealt with the construction, location, and number of toilet facilities within a workplace. Many comments were addressed to proposed table J-1 which related the number of employees at a workplace with minimum number of toilet facilities. Several comments suggested that no specific numbers should be used with reference to number of toilet facilities required, and that the standard should require only "adequate" or "sufficient" toilet facilities. Others suggested different numbers than those in the proposed table, and submitted in evidence and testified on the efficacy of several State and organizational plumbing codes. Upon consideration of all these comments and submissions, table J-1 is made less restrictive with respect to water closets.

Similar commentary was received concerning the requirement in the proposal that there be at least one lavatory in the toilet room or immediately adjacent thereto for every required toilet facility. The evidence has been convincing that this requirement exceeds realistic bounds, and it is decided that one lavatory need be provided for every three required toilet facilities.

10. The proposal would eliminate any reference to separate facilities based on sex. Many comments were received on this issue. The gist is that the standard should require separate toilet facilities for each sex, with specified exceptions. The comments pointed out that where men and women shared toilet rooms with multiple facilities, there could be serious

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and serviced so that sanitary conditions are maintained, shall be capable of being closed, and shall be equipped with a tap.

(iv) Ice in contact with drinking water shall be made of potable water and maintained in a sanitary condition.

(v) Open containers such as barrels, pails, or tanks for drinking water from which the water must be dipped or poured, whether or not they are fitted with a cover, are prohibited.

(vi) A common drinking cup and other common utensils are prohibited.

(vii) Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

(2) **Nonpotable water.**—(i) Outlets for nonpotable water, such as water for industrial or firefighting purposes, shall be posted or otherwise marked in a manner that will indicate clearly that the water is unsafe and is not to be used for drinking, washing of the person, cooking, washing of food, washing of cooking or eating utensils, washing of food preparation or processing premises, or personal service rooms, or for washing clothes.

(ii) Construction of nonpotable water systems or systems carrying any other nonpotable substance shall be such as to prevent backflow or backsiphonage into a potable water system.

(iii) Nonpotable water shall not be used for washing any portion of the person, cooking or eating utensils, or clothing. Nonpotable water may be used for cleaning work premises, other than food processing and preparation premises and personal service rooms: *Provided*, That this nonpotable water does not contain concentrations of chemicals, fecal coliform, or other substances which could create insanitary conditions or be harmful to employees.

(c) **Toilet facilities.**—(1) **General.**—(i) Except as otherwise indicated in this subdivision (i), toilet facilities, in toilet rooms separate for each sex, shall be provided in all places of employment in accordance with table J-1 of this section. The number of facilities to be provided for each sex shall be based on the number of employees of that sex for whom the facilities are furnished. Where toilet rooms will be occupied by no more than one person at a time, can be locked from the inside, and contain at least one water closet, separate toilet rooms for each sex need not be provided. Where such single-occupancy rooms have more than one toilet facility, only one such facility in each toilet room shall be counted for the purpose of table J-1.

TABLE J-1

Number of employees:	Minimum number of water closets ¹
1 to 15.....	1
16 to 35.....	2
36 to 55.....	3
56 to 80.....	4
81 to 110.....	5

Number of employees:	Minimum number of water closets ¹
111 to 150.....	5
Over 150.....	1 additional fixture for each additional 40 employees.

¹Where toilet facilities will not be used by women, urinals may be provided instead of water closets, except that the number of water closets in such cases shall not be reduced to less than $\frac{1}{2}$ of the minimum specified.

(ii) The requirements of subdivision (i) of this subparagraph do not apply to mobile crews or to normally unattended work locations so long as employees working at these locations have transportation immediately available to nearby toilet facilities which meet the other requirements of this subparagraph.

(iii) The sewage disposal method shall not endanger the health of employees.

(iv) When persons other than employees are permitted the use of toilet facilities on the premise, the number of such facilities shall be appropriately increased in accordance with table J-1 of this section in determining the minimum number of toilet facilities required.

(v) Toilet paper with holder shall be provided for every water closet.

(vi) Covered receptacles shall be kept in all toilet rooms used by women.

(vii) For each three required toilet facilities at least one lavatory shall be located either in the toilet room or adjacent thereto. Where only one or two toilet facilities are provided at least one lavatory so located shall be provided.

(2) **Construction of toilet rooms.**—(i) Each water closet shall occupy a separate compartment with a door and walls or partitions between fixtures sufficiently high to assure privacy.

(ii) In all toilet rooms installed on or after August 31, 1971, the floor and side walls, including the angle formed by the floor and sidewalls, and excluding doorways and entrances, shall be watertight. The sidewalls shall be watertight to a height of at least 5 inches.

(iii) The floors, walls, ceilings, partitions, and doors of all toilet rooms shall be of a finish that can be easily cleaned. In installations made on or after August 31, 1971, cove bases shall be provided to facilitate cleaning.

(3) **Construction and installation of toilet facilities.** (i) Every water carriage toilet facility shall be set entirely free and open from all enclosing structures and shall be so installed that the space around the facility can be easily cleaned. This provision does not prohibit the use of wall-hung-type water closets or urinals.

(ii) Every water closet shall have a hinged seat made of substantial material having a nonabsorbent finish. Seats installed or replaced after June 4, 1973, shall be of the open-front type.

(iii) Nonwater carriage toilet facilities and disposal systems shall be in accordance with § 1910.143.

(d) **Washing facilities.**—(1) **General.**—Washing facilities shall be maintained in a sanitary condition.

(2) **Lavatories.**—(i) Lavatories shall be made available in all places of employment in accordance with the requirements for lavatories as set forth in table J-2 of this section. In a multiple-use lavatory, 24 linear inches of wash sink or 20 inches of a circular basin, wash provided with water outlets for each space, shall be considered equivalent to one lavatory. The requirements of this subdivision do not apply to mobile crews or to normally unattended work locations if employees working at these locations have transportation readily available to nearby washing facilities which meet the other requirements of this paragraph.

TABLE J-2

Type of employment	Number of employees	Minimum number of lavatories
Nonindustrial—office buildings, public buildings, and similar establishments.	1-15.....	1
	16-35.....	2
	36-55.....	3
	56-80.....	4
	81-110.....	5
	Over 110.....	1 additional fixture for each additional 40 employees.
Industrial—factories, warehouses, loft buildings, and similar establishments.	1-100.....	1 fixture for each 10 employees.
	Over 100.....	1 fixture for each additional 15 employees.

(ii) Each lavatory shall be provided with hot and cold running water, or tepid running water.

(iii) Hand soap or similar cleansing agents shall be provided.

(iv) Individual hand towels or sections thereof, of cloth or paper, warm air blowers or clean individual sections of continuous cloth toweling, convenient to the lavatories, shall be provided.

(v) Receptacles shall be provided for disposal of used towels.

(vi) Warm air blowers shall provide air at not less than 90° F. and shall have means to automatically prevent the discharge of air exceeding 140° F.

(vii) Electrical components of warm air blowers shall meet the requirements of subpart S of this part.

(3) **Showers.**—(i) Whenever showers are required by a particular standard, the showers shall be provided in accordance with subdivisions (ii) through (v) of this subparagraph.

(ii) One shower shall be provided for each 10 employees of each sex, or numerical fraction thereof, who are required to shower during the same shift.

(iii) Body soap or other appropriate cleansing agents convenient to the showers shall be provided as specified in paragraph (d) (3) (iii) of this section.

(iv) Showers shall be provided with hot and cold water feeding a common discharge line.

(v) Employees who use showers shall be provided with individual clean towels.

(e) **Change rooms.**—Whenever employees are required by a particular

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