

TGG: JGL: MMG: RF
XF:

TO: Safety Directors

FROM: T. G. Grumbles

DATE: June 28, 1988

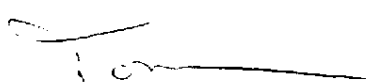
Interoffice
Communication

SUBJ: OSHA PEL REVISION PROPOSAL

VISTA

Attached is a summary of the OSHA rulemaking published in the Federal Register on June 7. The proposal is over 400 pages long. Please let me know if you'd like a copy.

The enclosed is the "guts" of the proposal. Table Z-4 (starting on page 16 of the attachment) is the list of all proposed changes and additions. Preliminary review indicates the most significant change to us is the proposal to drop the PEL for EDC from 50 ppm to 1.0 ppm. The Vinyl Institute and the EDC Panel will be making comments on this specific proposal. We participate in both groups.


T. G. Grumbles

ajo
.301

Attachment

VVV 000014528



GENERAL INFORMATION BULLETIN

Editor: Mary P. Kilcoyne

JUN 27 '88

G-32

June 16, 1988

Route: _____

FEDERAL LEVEL

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

AIR CONTAMINANTS

Copy: _____

File: _____

The Occupational Safety and Health Administration published proposed amendments to its existing air contaminants standards in the June 7th Federal Register (pp. 20960-21393).

The 433-page proposed rule would revise and update exposure limits contained in OSHA's Z-tables at 29 CFR 1910.1000. The limits were adopted from then-current 1968 levels recommended by the American Conference of Governmental Industrial Hygienists.

The rule would reduce exposure limits for about 100 substances listed in the Z-tables, raise the exposure limit for one substance, set permissible exposure limits for 205 substances currently not regulated by the agency, add or change short-term exposure limits for 70 substances and set short-term or skin-exposure limits where appropriate. Although the agency relied on ACGIH limits for the proposal, exposure limits recommended by NIOSH were proposed in about 35 cases.

According to agency estimates, the proposed exposure limits would prevent 50,000 cases of work-related illnesses each year, including cancer, liver and kidney impairments, and cardiovascular and respiratory diseases. In addition, OSHA estimates that the number of lost work days related to chemical exposures could decline by 500,000 annually and that 500 lives could be saved each year.

The proposed rule is expected to cost industry \$900 million annually.

Among the new limits, OSHA proposed an exposure limit for wood dust, which currently is not regulated, and for perchloroethylene. The limit for "perc," a chemical used in dry cleaning operations, has been the subject of recent controversy over whether it should be classified by the Environmental Protection Agency as a "possible" or "probable" carcinogen.

The proposed rule does not affect any substance for which rule making is already under way.

VVV 000014529

Under the proposed rule, the agency will allow the use of engineering controls, work practice controls, or respiratory protection to achieve exposure limits that will be changed by the rule making. Although this contradicts the agency's traditional reliance on engineering controls as the primary means of compliance, OSHA said that this would allow industry to comply with the rule as soon as possible.

(continued)

Written comments should be sent, postmarked no later than July 8th, to:

Docket Officer
Docket No. H-020, Room N-3670
U.S. Department of Labor
200 Constitution Avenue, NW
Washington, DC 20210

Telephone - 202 - 523 - 7894

Notices of intention to appear at public hearings on the proposal should be postmarked by July 1st and sent to:

Tom Hall
OSHA Division of Consumer Affairs
Docket No. H-020, Room N-3647
U.S. Department of Labor
200 Constitution Avenue, NW
Washington, DC 20210

Testimony and documentary evidence should be sent to Tom Hall at the above address.

The hearing will begin July 20th at 9:30 am in the auditorium of the Frances Perkins Building.

The text of the proposed rule is attached. Copies of the preamble and appendices are available from SDA.

X. Standard

OSHA propose to amend 29 CFR Part 1910 as follows:

PART 1910—[AMENDED]

1. The authority citation for Subpart Z of Part 1910 would be amended by revising the third paragraph, and the first and second paragraphs are republished to read as follows:

Authority: Secs. 6, 8, Occupational Safety and Health Act, 29 U.S.C. 655, 657; Secretary of Labor's Orders 12-71 (36 FR 8754), 8-76 (41 FR 25059), or 8-83 (48 FR 35736) as applicable, and 29 CFR 1911.

Section 1910.1000 Tables Z-1, Z-2, and Z-3 also issued under 5 U.S.C. 533.

Section 1910.1000 paragraphs (a) through (c), (e), (f) and Tables Z-1, Z-2, Z-3, not issued under 29 CFR 1911 except for the arsenic, cotton dust, benzene and formaldehyde listings.

2. It is proposed to amend § 1910.1000 by revising the introductory text, redesignating paragraph (d) as paragraph (f) and revising introductory text of paragraph (f) and the last sentence of paragraph (f)(1)(i); adding a new paragraph (d); republishing Tables Z-1, Z-2 and Z-3 with an asterisk

indicating the materials proposed to be removed and adding a new Table Z-4.

§ 1910.1000 [Amended]

An employee's exposure to any material listed in Tables Z-1, Z-2, Z-3 or Z-4 of this section shall be limited in accordance with the requirements of the following paragraphs of this section.

(d) Table Z-4 lists the proposed permissible exposure limits for 428 materials.

(1) An employee's exposure to any material listed in Table Z-4 shall not exceed the Time Weighted Average (TWA), Short Term Exposure Limit (STEL) or Ceiling specified in Table Z-4 for that material.

(2) An employee's skin exposure to materials listed in table Z-4 with an "S" Notation shall be limited through the use of gloves, coveralls, goggles, or other appropriate personal protection equipment necessary to prevent possible skin absorption.

(3) The following definitions apply to paragraph (d) of this section and Table Z-4:

(i) Time weighted average (TWA) is the average airborne exposure of an

employee in any 8-hour work shift of a 40-hour work week which shall not be exceeded.

(ii) Short term exposure limit (STEL) is the employee's 15-minute time weighted average exposure which shall not be exceeded at any time during a work day.

(iii) Ceiling is the employee's exposure which shall not be exceeded during any part of the work day. If instantaneous monitoring is not feasible, then the ceiling shall be assessed by sampling over a 15-minute period as would be done for a STEL, unless a different time period is specifically indicated.

(f) Computational formula. The computation formula which shall apply to employee exposure to more than 1 material for which 8 hour time weighted averages are listed in Subpart Z of 29 CFR Part 1910 in order to determine whether an employee is exposed over the regulatory limit is as follows:

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

TABLE Z-1

Substance	ppm ^a	mg/m ^{3b}
ACETALDEHYDE*	200	360
ACETIC ACID*	10	25
ACETIC ANHYDRIDE*	5	20
ACETONE*	1000	2400
ACETONITRILE*	40	70
ACETYLENE DICHLORIDE, see 1,2-DICHLOROETHYLENE		
ACETYLENE TETRABROMIDE	1	14
ACROLEIN*	0.1	0.25
ACRYLAMIDE-Skin*		0.3
ALDRIN-Skin		0.25
ALLYL ALCOHOL-Skin*	2	5
ALLYL CHLORIDE*	1	3
C ALLYLGLYCIDYL ETHER (AGE)*	10	45
ALLYL PROPYL DISULFIDE*	2	12
2-AMINOETHANOL, see ETHANOLAMINE		
2-AMINOPYRIDINE	0.5	2
AMMONIA*	50	35
AMMONIUM SULFAMATE (AMMATE)*		15
N-AMYL ACETATE	100	525
SEC-AMYL ACETATE	125	650
ANILINE-Skin*	5	19
ANISIDINE (O,P-ISOMERS)-Skin		0.5
ANTHRONY AND COMPOUNDS(as Sb)		0.6
ANTU (ALPHA NAPHTHYL THIOUREA)*		0.3
ARSENIC ORGANIC COMPOUNDS (as As)		0.5
ARSINE	0.05	0.2

TABLE Z-1

Substance	ppm ^a	mg/m ^{3b}
AZINPHOS-METHYL-Skin*		0.2
BARIUM [SOLUBLE COMPOUNDS]		0.5
p-BENZOQUINONE, see QUINONE		
BENZOYL PEROXIDE		5
BENZYL CHLORIDE	1	5
BIPHENYL, see DIPHENYL		
BORON OXIDE*		15
C BORON TRIFLUORIDE	1	3
BROMINE*	0.1	0.7
BROMOFORM-Skin	0.5	5
BUTADIENE (1,3-BUTADIENE)	1000	2200
BUTANETHIOL, see BUTYL MERCAPTAN		
2-BUTANONE*	200	590
2-BUTOXY ETHANOL(BUTYL CELLOSOLVE)-Skin*	50	240
BUTYL ACETATE (N-BUTYL ACETATE)*	150	710
SEC-BUTYL ACETATE	200	950
TERT-BUTYL ACETATE	200	950
BUTYL ALCOHOL*	100	300
SEC-BUTYL ALCOHOL*	150	450
TERT-BUTYL ALCOHOL*	100	300
C BUTYLAMINE-Skin	5	15
C TERT-BUTYL CHROMATE (as CrO ₃)-Skin		0.1
N-BUTYL GLYCIDYL ETHER*	50	270
BUTYL MERCAPTAN*	10	35
P-TERT-BUTYL TOLUENE*	10	60
CALCIUM OXIDE*		5
CAMPHOR*		2

VW 00001453Z

TABLE 2-1

Substance	ppm ^a	mg/m ^{3b}
CARBARYL (SEVIN)		5
CARBON BLACK		3.5
CARBON DIOXIDE	5000	9000
CARBON MONOXIDE	50	55
CHLORDANE-Skin		0.5
CHLORINATED CAMPHENE-Skin		0.5
CHLORINATED DIPHENYL OXIDE		0.5
C CHLORINE	1	3
CHLORINE DIOXIDE	0.1	0.3
C CHLORINE TRIFLUORIDE	0.1	0.4
C CHLOROACETALDEHYDE	1	3
A-CHLOROACETOPHENONE (PHENACYLCHLORIDE)	0.05	0.3
CHLOROBENZENE (MONOCHLOROBENZENE)	75	350
O-CHLOROBENZYLIDENE MALONONITRILE (OCBM)	0.05	0.4
CHLOROBROMOMETHANE	200	1050
2-CHLORO-1,3-BUTADIENE, see CHLOROPRENE		
CHLORODIPHENYL (42 PERCENT CHLORINE)-Skin		1
CHLORODIPHENYL (54 PERCENT CHLORINE)-Skin		0.5
1-CHLORO, 2,3-EPOXYPROPANE, see EPICHLORHYDRIN		
2-CHLOROETHANOL, see ETHYLENE CHLOROHYDRIN		
CHLOROETHYLENE, see VINYL CHLORIDE		
C CHLOROFORM (TRICHLOROMETHANE)	50	240
1-CHLORO-1-NITROPROPANE	20	100
CHLOROPICRIN	0.1	0.7
CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)-Skin	25	90
CHROMIUM, SOL. CHROMIC, CHROMOUS SALTS AS Cr		0.5
CHROMIUM, METAL AND INSOLUBLE SALTS		1

TABLE 2-1

Substance	ppm ^a	mg/m ^{3b}
COAL TAR PITCH VOLATILES (BENZENE SOLUBLE FRACTION)		
ANTHRACENE, BaP, PHENANTHRENE, ACRIDINE, CHRYSENE, PYRENE)		0.2
COBALT, METAL FUME AND DUST		0.1
COPPER FUME		0.1
COPPER DUSTS AND MISTS		1
COTTON DUST (RAW)		1 ^c
CRAG HERBICIDE		15
CRESOL (ALL ISOMERS)-Skin	5	22
CROTONALDEHYDE	2	6
CUMENE-Skin	50	245
CYANIDE (as Cn)-Skin		5
CYCLOHEXANE	300	1050
CYCLOHEXANOL	50	200
CYCLOHEXANONE	50	200
CYCLOHEXENE	300	1015
CYCLOPENTADIENE	75	200
2,4-D		10
DDT-Skin		1
DDVP -Skin		1
DECABORANE-Skin	0.05	0.3
DEMETON -Skin		0.1
DIACETONE ALCOHOL (4-HYDROXY-4-METHYL-2-PENTANONE)	50	240
1,2-DIAMINOETHANE, see ETHYLENEDIAMINE		
DIAZOMETHANE	0.2	0.4
DIBORANE	0.1	0.1
DISUTYL PHOSPHATE	1	5

VWV 000014533

TABLE 2-1

Substance	ppm ^a	mg/m ^{3b}
DIBUTYLPHthalATE		5
C D-DICHLOROBEZENE*	50	300
P-DICHLOROBEZENE*	75	450
DICHLORO(FLUOROMETHANE	1000	4950
1,3-DICHLORO-5,5-DIMETHYL HYDANTOIN*		0.2
1,1-DICHLOROETHANE*	100	400
1,2-DICHLOROETHYLENE	200	790
C DICHLOROETHYL ETHER-Skin*	15	30
DICHLOROMETHANE, see METHYLENECHLORIDE		
DICHLOROMONOFUOROMETHANE*	1000	4200
C 1,1-DICHLORO-1-NITROETHANE*	10	60
1,2-DICHLOROPROPANE, see PROPYLENECHLORIDE		
DICHLOROTETRAFLUOROETHANE	1000	7000
DIELDRIN-Skin		0.25
DIETHYLAMINE*	25	75
DIETHYLAMINO ETHANOL-Skin	10	50
DIETHYLETHER, see ETHYL ETHER		
DIFLUORODIBROMOMETHANE	100	860
C DIGLYCIDYL ETHER (DGE)*	0.5	2.8
DIHOROXYBEZENE, see HYDROQUINONE		
DIISOBUTYL KETONE*	50	230
DIISOPROPYLAMINE-Skin	5	20
DIMETHOXYMETHANE, see METHYLAL		
DIMETHYL ACETAMIDE-Skin	10	35
DIMETHYLAMINE	10	18
DIMETHYLAMINOBEZENE, see XYLIDENE		
DIMETHYLANILINE (N-DIMETHYL-ANILINE)-Skin*	5	25

TABLE 2-1

Substance	ppm ^a	mg/m ^{3b}
DIMETHILBEZENE, see XYLENE		
DIMETHYL 1,2-DIBROMO-2,2-DICHLOROETHYL PHOSPHATE (DIBROM)		3
DIMETHYLFORMAMIDE-Skin	10	30
2,6-DIMETHYLHEPTANONE, see DIISOBUTYL KETONE		
1,1-DIMETHYLHYDRAZINE-Skin	0.5	1
DIMETHYLPHthalATE		5
DIMETHYLSULFATE-Skin*	1	5
DINITROBEZENE (ALL ISOMERS)-Skin		1
DINITRO-O-CRESOL-Skin		0.2
DINITROTOLUENE-Skin		1.5
DIOXANE (DIETHYLENE DIOXIDE)-Skin*	100	360
DIPHENYL	0.2	1
DIPHENYLMETHANE DIISOCYANATE (see METHYLENE BIS-PHENYL ISOCYANATE (MOI))		
DIPROPYLENE GLYCOL METHYL ETHER-Skin*	100	600
DI-SEC. OCTYL-PHTHALATE (DI-2-ETHYLHEXYLPHthalATE)*		5
ENDRIN-Skin		0.1
EPICHLOROHYDRIN-Skin*	5	19
EPN-Skin		0.5
1,2-EPOXYPROPANE, see PROPYLENEOXIDE		
2,3-EPOXY-1-PROPANOL, see GLYCIDOL		
ETHANETHIOL, see ETHYLMERCAPTAN		
ETHANGLAMINE*	3	6
2-ETHOXYETHANOL -Skin	200	740
2-ETHOXYETHYLACETATE-(CELLO-SOLVE ACETATE)-Skin	100	540
ETHYL ACETATE	400	1400

VW 000014534

TABLE 2-1

Substance	ppm ^a	mg/m ^{3b}
ETHYL ACRYLATE-Skin ^a	25	100
ETHYL ALCOHOL (ETHANOL)	1000	1900
ETHYLAMINE	10	18
ETHYL SEC-AMYL KETONE (5-METHYL-3-HEPTANONE)	25	130
ETHYL BENZENE ^a	100	435
ETHYL BROMIDE ^a	200	890
ETHYL BUTYL KETONE (3-HEPTANONE)	50	230
ETHYL CHLORIDE	1000	2600
ETHYL ETHER ^a	400	1200
ETHYL FORMATE	100	300
C ETHYL MERCAPTAN ^a	10	25
ETHYL SILICATE ^a	100	850
ETHYLENE CHLOROHYDRIN-Skin ^a	5	16
ETHYLENEDIAMINE	10	25
C ETHYLENE GLYCOL DINITRATE AND/OR NITROGLYCERIN -Skin ^a	0.2 ^d	1
ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE, see METHYL CELLOSOLVE ACETATE		
ETHYLENE IMINE-Skin	0.5	1
N-ETHYLMORPHOLINE-Skin ^a	20	94
FERBAN ^a		15
FERROVANADIUM DUST ^a		1
FLUORIDE (AS F)		2.5
FLUORINE ^a	0.1	0.2
FLUOROTRICHLOROMETHANE ^a	1000	5600
FORMIC ACID	5	9
FURFURAL-Skin ^a	5	20

TABLE 2-1

Substance	ppm ^a	mg/m ^{3b}
FURFURYL ALCOHOL ^a	50	200
GLYCIDOL (2,3-EPOXY-1-PROPANOL) ^a	50	150
GLYCOL MONOMETHYL ETHER, see 2-ETHOXYETHANOL		
GLUTHIMON, see AZINPHOSMETHYL		
HAFNIUM		0.5
HEPTACHLOR-Skin ^a		0.5
HEPTANE (N-HEPTANE) ^a	500	2000
HEXACHLOROETHANE-Skin ^a	1	10
HEXACHLORONAPHTHALENE-Skin		0.2
HEXANE (N-HEXANE) ^a	500	1800
2-HEXANONE ^a	100	410
HEXONE (METHYL ISOBUTYL KETONE) ^a	100	410
SEC-HEXYL ACETATE	50	300
HYDRAZINE-Skin ^a	1	1.3
HYDROGEN BROMIDE ^a	3	10
C HYDROGEN CHLORIDE	5	7
HYDROGEN CYANIDE-Skin ^a	10	11
HYDROGEN PEROXIDE (90%)	1	1.4
HYDROGEN SELENIDE	0.05	0.2
HYDROQUINONE		2
C IODINE	0.1	1
IRON OXIDE FUME ^a		10
ISOMYL ACETATE	100	525
ISOMYL ALCOHOL ^a	100	360
ISOBUTYL ACETATE	150	700
ISOBUTYL ALCOHOL ^a	100	300

VVV 000014535

TABLE 2-1

Substance	ppm ^a	mg/m ^{3b}
ISOPHORONE [*]	25	140
ISOPROPYL ACETATE [*]	250	950
ISOPROPYL ALCOHOL [*]	400	980
ISOPROPYLAMINE [*]	5	12
ISOPROPYLETHER [*]	500	2100
ISOPROPYL GLYCIDYL ETHER (IGE) [*]	50	240
KETENE [*]	0.5	0.9
LINDANE-Sk In		0.5
LITHIUM HYDRIDE		0.025
L.P.G. (LIQIFIED PETROLEUM GAS)	1000	1800
MAGNESIUM OXIDE FUME [*]		15
MALATHION-Sk In [*]		15
MALEIC ANHYDRIDE	0.25	1
C MANGANESE [*]	5	5
MESITYL OXIDE [*]	25	100
METHANETHIOL, see METHYL MERCAPTAN [*]		
METHOXYCHLOR [*]		15
2-METHOXYETHANOL, see METHYL CELLOSOLVE		
METHYL ACETATE [*]	200	610
METHYL ACETYLENE (PROPYLENE)	1000	1650
METHYL ACETYLENE-PROPADIENE MIXTURE (HAPP) [*]	1000	1800
METHYL ACRYLATE-Sk In	10	35
METHYLAL (DIMETHOXYMETHANE)	1000	3100
METHYL ALCOHOL (METHANOL) [*]	200	260
METHYLAMINE	10	12
METHYL AMYL ALCOHOL, see ISOBUTYL CARBONOL		
METHYL (N-AMYL) KETONE (2-HEPTANONE) [*]	100	465

TABLE 2-1

Substance	ppm ^a	mg/m ^{3b}
C METHYL BROMIDE-Sk In [*]	20	80
METHYL BUTYL KETONE, see 2-HEXANONE		
METHYL CELLOSOLVE-Sk In	25	80
METHYL CELLOSOLVE ACETATE-Sk In	25	120
METHYL CHLOROFORM [*]	350	1900
METHYLCYCLOHEXANE [*]	500	2000
METHYLCYCLOHEXANOL [*]	100	470
O-METHYLCYCLOHEXANONE-Sk In [*]	100	460
METHYL ETHYL KETONE (MEK), see 2-BUTANONE		
METHYL FORMATE [*]	100	250
METHYL IODIDE-Sk In [*]	5	28
METHYL ISOBUTYL CARBINOL-Sk In [*]	25	100
METHYL ISOBUTYL KETONE, see HEXONE		
METHYL ISOCYANATE-Sk In		
C METHYL MERCAPTAN [*]	0.02	0.05
METHYL METHACRYLATE	10	20
METHYL PROPYL KETONE, see 2-PENTANONE	100	410
C A-METHYL STYRENE [*]	100	480
C METHYLENE BISPHENYL ISOCYANATE (MDI)	0.02	0.2
MOLYBDENUM (INSOLUBLE COMPOUNDS)		15
MOLYBDENUM (SOLUBLE COMPOUNDS)		5
MONOMETHYL ANILINE-Sk In [*]	2	9
C MONOMETHYL HYDRAZINE-Sk In	0.2	0.35
MORPHOLINE-Sk In [*]	20	70
NAPHTHA (COAL TAR)	100	400
NAPHTHALENE [*]	10	50
NICKEL CARBONYL	0.001	0.007

VVV 000014536

TABLE 2-1

Substance	ppm ^a	mg/m ^{3b}
NICKEL, (METAL AND SOLUBLE COMPOUNDS AS NI)		1
NICOTINE-Skin		0.5
NITRIC ACID [*]	2	5
NITRIC OXIDE	25	30
P-NITROANILINE-Skin [*]	1	5
NITROBENZENE-Skin	1	5
P-NITROCHLOROBENZENE-Skin [*]		1
NITROETHANE	100	310
C NITROGEN DIOXIDE [*]	5	9
NITROGEN TRIFLUORIDE	10	29
C NITROGLYCERIN-Skin [*]	0.2	2
NITROMETHANE	100	250
1-NITROPROPANE	25	90
2-NITROPROPANE [*]	25	90
NITRO-OLUENE-Skin [*]	5	30
NITROTRICHLOROMETHANE, see CHLOROPICRINE		
OCTACHLORONAPHTHALENE-Skin [*]		0.1
OCTANE [*]	500	2350
OIL MIST, MINERAL [*]		5
OSMIUM TETROXIDE [*]		0.002
OXALIC ACID [*]		1
OXYGEN DIFLUORIDE [*]	0.05	0.1
OZONE [*]	0.1	0.2
PARAQUAT-Skin [*]		0.5
PARATHION-Skin		0.1
PENTAGRANE [*]	0.005	0.01
PENTACHLORONAPHTHALENE-Skin		0.5

TABLE 2-1

Substance	ppm ^a	mg/m ^{3b}
PENTACHLOROPHENOL-Skin		0.5
PENTANE [*]	1000	2950
2-PENTANONE [*]	200	700
PERCHLOROMETHYL MERCAPTAN	0.1	0.8
PERCHLORYL FLUORIDE [*]	3	13.5
PETROLEUM DISTILLATES (NAPHTHA) [*]	500	2000
PHENOL-Skin	5	19
P-PHENYLENE DIAMINE-Skin		0.1
PHENYL ETHER (VAPOR) [*]	1	7
PHENYL ETHER- BIPHENYL MIXTURE (VAPOR)	1	7
PHENYLETHYLENE, see STYRENE		
PHENYL GLYCIDYL ETHER (PGE) [*]	10	60
PHENYLHYDRAZINE-Skin [*]	5	22
PHOSDRIN (MEVINPHOS)-Skin [*]		0.1
PHOSGENE (CARBONYL CHLORIDE)	0.1	0.4
PHOSPHINE [*]	0.3	0.4
PHOSPHORIC ACID [*]		1
PHOSPHORUS (YELLOW)		0.1
PHOSPHORUS PENTACHLORIDE		1
PHOSPHORUS PENTASULFIDE [*]		1
PHOSPHORUS TRICHLORIDE [*]	0.5	3
PHTHALIC ANHYDRIDE [*]	2	12
PICRIC ACID-Skin [*]		0.1
PIVAL (2-PIVALYL-1,3-INDANDIONE)		0.1
PLATINUM (SOLUBLE SALTS) AS PL		2.002
PROPANE	1000	1800
N-PROPYL ACETATE [*]	200	840

VVV 000014537

TABLE 2-1

Substance	ppm ^a	mg/m ^{3b}
PROPYL ALCOHOL*	200	500
N-PROPYL NITRATE*	25	110
PROPYLENE DICHLORIDE*	75	350
PROPYLENE IMINE-Skin	2	5
PROPYLENE OXIDE*	100	240
PROPYLENE, see METHYLACETYLENE		
PYRETHRUM		5
PYRIZINE	5	15
QUINONE	0.1	0.4
RHODIUM, METAL FUME AND DUST, AS RI*		0.1
RHODIUM (SOLUBLE SALTS)*		0.001
RONNEL*		15
ROTENONE (COMMERCIAL)		5
SELENIUM COMPOUNDS (AS Se)		0.2
SELENIUM HEXAFLUORIDE	0.05	0.4
SILVER, METAL AND SOLUBLE COMPOUNDS*		0.01
SODIUM FLUOROACETATE (1080) -Skin*		0.05
SODIUM HYDROXIDE*		2
STIBINE	0.1	0.5
STODGARD SOLVENT*	500	2500
STRYCHNINE		0.15
SULFUR DIOXIDE	5	13
SULFUR HEXAFLUORIDE	1000	5000
SULFURIC ACID		1
SULFUR MONOCHLORIDE*	1	5
SULFUR PENTAFLUORIDE	0.025	0.25
SULFURYL FLUORIDE	5	20

TABLE 2-1

Substance	ppm ^a	mg/m ^{3b}
SYSTOX, see BENETON		
2,4,5T		10
TANTALUM*		5
TEOP-Skin		0.2
TELLURIUM		0.1
TELLURIUM HEXAFLUORIDE	0.02	0.2
TEPP-Skin		0.05
2 TERPHENYLS*	1	9
1,1,2,2-TETRACHLORO-1,2-DIFLUOROETHANE	500	4170
1,1,1,2-TETRACHLORO-2,2-DIFLUOROETHANE	500	4170
1,1,2,2-TETRACHLOROETHANE-Skin*	5	35
TETRACHLOROMETHANE, see CARBON TETRACHLORIDE		
TETRACHLORONAPHTHALENE-Skin		2
TETRAETHYL LEAD (AS Pb)-Skin*		0.075
TETRAHYDROFURAN*	200	590
TETRAMETHYL LEAD (AS Pb)-Skin*		0.075
TETRAMETHYL SUCCINONITRILE-Skin	0.5	3
TETRA-NITROMETHANE	1	8
TETRYL (2,4,6-TRINITROPHENOL-METHYL-NITRAMINE)-Skin		1.5
THALLIUM (SOLUBLE COMPOUNDS)-Skin AS TI*		0.1
THIRAM		5
TIN (INORGANIC COMPOUNDS EXCEPT OXIDES)		2
TIN (ORGANIC COMPOUNDS)*		0.1
2-TOLUENE-2,4-DIISOCYANATE*	0.02	0.14
2-TOLUIDINE-Skin*	5	22
TOXAPHENE, see CHLORINATED CAMPHENE		

VVV 000014538

TABLE Z-1

Substance	ppm ^a	mg/m ^{3b}
TRIBUTYL PHOSPHATE [*]		5
1,1,1-TRICHLOROETHANE, see METHYL CHLOROFORM		
1,1,2-TRICHLOROETHANE-Skin [*]	10	45
TITANIUM DIOXIDE		15
TRICHLOROMETHANE, see CHLOROFORM		
TRICHLORONAPHTHALENE-Skin		5
1,2,3-TRICHLOROPROPANE [*]	50	300
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE [*]	1000	7600
TRIETHYLAMINE [*]	25	100
TRIFLUORONOBROMOMETHANE	1000	6100
2,4,6 - TRINITROPHENOL, see PICRIC ACID		
2,4,6 - TRINITROPHENOLMETHYL-MITRAMINE, see TETRYL		
TRINITROTOLUENE-Skin [*]		1.5
TRIPHTHOCHRESYL PHOSPHATE [*]		0.1
TRIPHENYL PHOSPHATE		3
TURPENTINE	100	560
URANIUM (SOLUBLE COMPOUNDS) [*]		0.05
URANIUM (INSOLUBLE COMPOUNDS) [*]		0.25
C VANADIUM (V2O5, DUST) [*]		0.5
C VANADIUM (V2O5, FUME) [*]		0.1
VINYL BENZENE, see STYRENE		
VINYL CYANIDE, see ACRYLONITRILE		
VINYL TOLUENE [*]	100	480
WARFARIN		0.1
XYLENE (XYLOL) [*]	100	435
XYLIDINE-Skin	5	25
ZINC TRITRIM		1

TABLE Z-1

Substance	ppm ^a	mg/m ^{3b}
ZINC CHLORIDE FUME [*]		1
ZINC OXIDE (FUME) [*]		5
ZIRCONIUM COMPOUNDS (AS Zr) [*]		5

^aParts of vapor or gas per million parts of contaminated air by volume at 25° C and 760 mm. Hg pressure.

^bApproximate milligrams of particulate per cubic meter of air.

(No footnote "c" is used to avoid confusion with ceiling value notations.)

^cAn atmospheric concentration of not more than 0.02 p.p.m. or personal protection may be necessary to avoid headache.

^dThis 8-hour time weighted average is for respirable dust as measured by a vertical elutriator cotton dust sampler or equivalent instrument. This time weighted average applies to the cotton waste processing operations of waste recycling (sorting, blending, cleaning, and willowing) and ginning.

^eSubstances that are in Table Z-4 in this proposal.

VVV 000014539

TABLE 2-2

Material	8-hour time weighted average	Acceptable ceiling concentration	Acceptable maximum peak above the acceptance ceiling concentration for an 8-hour shift	
			Concentration	Maximum duration
BENZENE (Z37.40-1969)	10 p.p.m.	25 p.p.m.	50 p.p.m.	10 minutes
BERYLLIUM AND BERYLLIUM COMPOUNDS (Z37.29-1970)*	2 ug/M ³	5 ug/M ³	25 ug/M ³	30 minutes
CADMIUM FUME (Z37.5-1970)	0.1 mg/M ³	0.3 mg/M ³		
CADMIUM DUST (Z37.5-1970)	0.2 mg/M ³	0.6 mg/M ³		
CARBON DISULFIDE (Z37.3-1968)*	20 p.p.m.	30 p.p.m.	100 p.p.m.	30 minutes
CARBON TETRACHLORIDE (Z37.17-1967)*	10 p.p.m.	25 p.p.m.	200 p.p.m.	5 minutes in any 4 hours
CHROMIC ACID AND CHROMATES (Z37.7-1971)*		1 mg/10M ³		
ETHYLENE DIBROMIDE (Z37.31-1970)	20 p.p.m.	30 p.p.m.	50 p.p.m.	5 minutes
ETHYLENE DICHLORIDE (Z37.21-1969)*	50 p.p.m.	100 p.p.m.	200 p.p.m.	5 minutes in any 3 hours

VVV 000014540

TABLE Z-2

11

Material	8-hour time weighted average	Acceptable ceiling concentration	Acceptable maximum peak above the acceptance ceiling concentration for an 8-hour shift	
			Concentration	Maximum duration
FORMALDEHYDE (Z37.16-1967)	3 p.p.m.	5 p.p.m.	10 p.p.m.	30 minutes
HYDROGEN FLUORIDE (Z37.28-1969)*	3 p.p.m.			
HYDROGEN SULFIDE (Z37.2-1966)*		20 p.p.m.	50 p.p.m.	10 minutes once only if no other measurable exposure occurs
FLUORIDE AS DUST (Z37.28-1969)	2.5 mg/M ³			
MERCURY (Z37.8-1971)*		0.1 mg/10M ³		
METHYL CHLORIDE (Z37.18-1969)*	100 p.p.m.	200 p.p.m.	300 p.p.m.	5 minutes in any 2 hours
METHYLENE CHLORIDE (Z37.23-1969)	500 p.p.m.	1,000 p.p.m.	2,000 p.p.m.	5 minutes in any 2 hours
ORGANO (ALKYL) MERCURY (Z37.30-1969)*	0.01 mg/M ³	0.04 mg/M ³		

VVV 000014541

TABLE Z-2

Material	8-hour time weighted average	Acceptable ceiling concentration	Acceptable maximum peak above the acceptance ceiling concentration for an 8- hour shift	
			Concentration	Maximum duration
STYRENE (Z37.15-1969)*	100 p.p.m.	200 p.p.m.	600 p.p.m.	5 minutes in any 3 hours
TETRACHLOROETHYLENE (Z37.22- 1967)*	100 p.p.m.	200 p.p.m.	300 p.p.m.	5 minutes in any 3 hours
TOLUENE (Z37.12-1967)*	200 p.p.m.	300 p.p.m.	500 p.p.m.	10 minutes
TRICHLOROETHYLENE (Z37.19- 1967)*	100 p.p.m.	200 p.p.m.	300 p.p.m.	5 minutes in any 2 hours

* Substances that are on Table Z-4 in this proposal.

TABLE Z-3

Substance	Mppcf ^e	Mg/M ³
SILICA:		
CRYSTALLINE		
QUARTZ (RESPIRABLE)*	$\frac{250^f}{\%SiO_2+5}$	$\frac{10 \text{ mg/M}^3 \text{ m}}{\%SiO_2+2}$
QUARTZ (TOTAL)		$\frac{30 \text{ mg/M}^3}{\%SiO_2+2}$
CRISTOBALITE*: Use 1/2 the value calculated from the count or mass formulae for quartz		
TRIDYMIT*: Use 1/2 the value calculated from the formulae for quartz		
AMORPHOUS, including natural diatomaceous earth	20	$\frac{80 \text{ mg/M}^3}{\%SiO_2}$
SILICATES (less than 1% crystalline silica):		
Mica*	20	
Soapstone	20	
Talc (non-asbestos-form)*	20 ⁿ	

TABLE Z-3

Substance	Mppcf ^e	Mg/M ³
Talc (fibrous). Use asbestos limit		
Tremolite (see talc, fibrous)		
Portland cement [•]	50	
GRAPHITE (NATURAL) [*]	15	
COAL DUST (respirable fraction less than 5% SiO ₂) [*]		2.4 mg/M ³
		or
For more than 5% SiO ₂ [•]		$\frac{10 \text{ mg/M}^3}{\% \text{SiO}_2 + 2}$
INERT OR NUISANCE DUST:		
Respirable fraction [*]	15	5 mg/M ³
Total dust	50	15 mg/M ³

NOTE: Conversion factors--mppcf X 35.3 = million particles per cubic meter = particles per c.c.

^eMillions of particles per cubic foot of air, based on impinger samples counted by light field techniques.

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

VVV 000014544

^mBoth 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:

ⁿContaining less than 1% quartz; if 1% quartz, use quartz limit.

Aerodynamic diameter (unit density sphere)	Percent 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. 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.

- Substances that are in Table Z-4 in this proposal.

VVV 000014545

TABLE 2-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN- NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1001 ACETALDEHYDE	180	100	270	150	—	—	
1002 ACETIC ACID	25	10	37	15	—	—	
1003 ACETIC ANHYDRIDE	—	—	—	—	20	5	
1004 ACETONE ^d	590	250	—	—	—	—	
1005 ACETONITRILE ^d	34	20	—	—	—	—	
1006 ACETYLSALICYLIC ACID (ASPIRIN)	5	—	—	—	—	—	
1007 ACROLEIN	0.25	0.1	0.8	0.3	—	—	
1008 ACRYLAMIDE	0.03	—	—	—	—	—	YES
1009 ACRYLIC ACID	30	10	—	—	—	—	
1010 ALLYL ALCOHOL	5	2	10	4	—	—	YES
1011 ALLYL CHLORIDE	3	1	6	2	—	—	
1012 ALLYL GLYCIDYL ETHER (AGE)	22	5	44	10	—	—	YES
1013 ALLYL PROPYL DISULFIDE	12	2	18	3	—	—	
1014 ALPHA-ALUMINA	10	—	—	—	—	—	
1015 ALUMINUM (ALKYLS)	2	—	—	—	—	—	
1016 ALUMINUM (METAL)	10	—	—	—	—	—	
1017 ALUMINUM (PYRO POWDERS)	5	—	—	—	—	—	
1018 ALUMINUM (SOLUBLE SALTS)	2	—	—	—	—	—	
1019 ALUMINUM (WELDING FUMES)	5	—	—	—	—	—	
1020 AMITROLE (3-AMINO-1,2,4-TRIAZOLE)	0.2	—	—	—	—	—	

VVV 000014546

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1021 AMMONIA	18	25	27	35	—	—	
1022 AMMONIUM CHLORIDE (FUME)	10	—	20	—	—	—	
1024 AMMONIUM SULFAMATE (AMMATE)	10	—	—	—	—	—	
1025 ANILINE	8	2	—	—	—	—	YES
1028 ASPHALT FUMES ^b	5	—	—	—	—	—	
1029 ATRAZINE	5	—	—	—	—	—	
1031 BARIUM SULFATE	10	—	—	—	—	—	
1032 BENOMYL	10	0.8	—	—	—	—	
1033 BERYLLIUM AND BERYLLIUM COMPOUNDS ^c	0.002	—	0.005	—	0.025	—	
			(30 min)				
1034 BISMUTH TELLURIDE (SE-DOPED)	5	—	—	—	—	—	
1035 BISMUTH TELLURIDE (UNDOPED)	10	—	—	—	—	—	
1036 BORATES, TETRA, SODIUM (ANHYDROUS)	1	—	—	—	—	—	
1037 BORATES, TETRA, SODIUM (DECAHYDRATE)	5	—	—	—	—	—	
1038 BORATES, TETRA, SODIUM (PENTAHYDRATE)	1	—	—	—	—	—	
1039 BORON OXIDE	10	—	—	—	—	—	
1040 BORON TRIBROMIDE	—	—	—	—	10	1	
1041 BROMACIL	10	1	—	—	—	—	
1042 BROMINE	0.7	0.1	2	0.3	—	—	
1043 BROMINE PENTAFLUORIDE	0.7	0.1	—	—	—	—	

VVV 000014547

TABLE 2-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1044 BUTANE	1900	800	--	--	--	--	
1045 2-BUTANONE (MEK)	590	200	885	300	--	--	
1046 2-BUTOXY ETHANOL	120	25	--	--	--	--	YES
1047 N-BUTYL ACETATE	710	150	950	200	--	--	
1048 BUTYL ACRYLATE	55	10	--	--	--	--	
1049 SEC-BUTYL ALCOHOL	305	100	455	150	--	--	
1050 TERT-BUTYL ALCOHOL	300	100	450	150	--	--	
1051 N-BUTYL ALCOHOL	--	--	--	--	150	50	YES
1052 N-BUTYL GLYCIDYL ETHER	135	25	--	--	--	--	
1053 N-BUTYL LACTATE	25	5	--	--	--	--	
1054 BUTYL MERCAPTAN	1.5	0.5	--	--	--	--	
1055 O-SEC-BUTYLPHENOL	30	5	--	--	--	--	YES
1056 P-TERT-BUTYL TOLUENE	60	10	120	20	--	--	
1057 CALCIUM CARBONATE	10	--	--	--	--	--	
1058 CALCIUM CYANAMIDE	0.5	--	--	--	--	--	
1059 CALCIUM HYDROXIDE	5	--	--	--	--	--	
1060 CALCIUM OXIDE	2	--	--	--	--	--	
1061 CALCIUM SILICATE, TOTAL DUST	10	--	--	--	--	--	
1062 CALCIUM SULFATE	10	--	--	--	--	--	
1063 CAMPHOR (SYNTHETIC)	12	2	18	3	--	--	

VVV 000014548

TABLE 2-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1064 CAPROLACTAM (DUST)	1	—	3	—	—	—	
1065 CAPROLACTAM (VAPOR)	20	5	40	10	—	—	
1066 CAPTAFOL (DIFOLATAN)	0.1	—	—	—	—	—	YES
1067 CAPTAN	5	—	—	—	—	—	
1068 CARBOFURAN (FURADAN)	0.1	—	—	—	—	—	
1069 CARBON DIOXIDE	9000	5000	54,000	30,000	—	—	
1070 CARBON DISULFIDE ^d	3	1	30	10	—	—	
1071 CARBON MONOXIDE ^d	40	35	—	—	229	200(NDT)	
1072 CARBON TETRABROMIDE	1.4	0.1	4.0	0.3	—	—	
1073 CARBON TETRACHLORIDE ^d	—	—	12.6	2	—	—	
			(60 min)				
1074 CARBONYL FLUORIDE	5	2	15	5	—	—	
1075 CATECHOL (PYROCATECHOL)	20	5	—	—	—	—	
1076 CELLULOSE	10	—	—	—	—	—	
1077 CESIUM HYDROXIDE	2	—	—	—	—	—	
1078 CHLORINATED CAMPHENE	0.5	—	1	—	—	—	YES
1079 CHLORINE ^d	—	—	1.45	0.5	—	—	
1080 CHLORINE DIOXIDE	0.3	0.1	0.9	0.3	—	—	
1081 1-CHLORO-1-NITROPROPANE	10	2	—	—	—	—	
1082 2-CHLORO-6-TRICHLOROMETHYL PYRIDINE (NITRAPYRIN)	10	—	20	—	—	—	

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1083 CHLOROACETYL CHLORIDE	0.2	0.05	--	--	--	--	
1084 O-CHLOROBENZYLIDENE MALONONITRILE	--	--	--	--	0.4	0.05	YES
1085 CHLORODIFLUOROMETHANE	3500	1000	4375	1250	--	--	
1086 CHLOROFORM ^d	--	--	9.78	2	--	--	
			(60 min)(60 min)				
1087 CHLOROPENTAFLUOROETHANE	6320	1000	--	--	--	--	
1088 CHLOROPRENE	35	10	--	--	--	--	YES
1089 O-CHLOROSTYRENE	285	50	430	75	--	--	
1090 O-CHLOROTOLUENE	250	50	375	75	--	--	
1091 CHLORPYRIFOS	0.2	--	0.6	--	--	--	YES
1092 CHROMIC ACID AND CHROMATES ^e	--	--	--	--	0.1	--	
1093 CHROMIUM, METAL	0.5	--	--	--	--	--	
1094 CHROMYL CHLORIDE	0.15	0.025	--	--	--	--	
1095 CLOPIDOL(COYDEN)	10	--	20	--	--	--	
1096 COAL DUST, < 5% QUARTZ, RESPIRABLE FRACTION	2	--	--	--	--	--	
1097 COAL DUST, > 5% QUARTZ, RESPIRABLE QUARTZ FRACTION	0.1	--	--	--	--	--	
1098 COBALT CARBONYL	0.1	--	--	--	--	--	
1099 COBALT HYDROCARBONYL	0.1	--	--	--	--	--	
1100 COBALT, METAL, FUME, DUST	0.05	--	--	--	--	--	
1101 COPPER (FUME) ^e	0.1	--	--	--	--	--	

VW 000014550

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1102 CRAQ HERBICIDE (SESONE)	10	—	—	—	—	—	
1103 CRUFOMATE	5	—	20	—	—	—	
1104 CYANAMIDE	2	—	—	—	—	—	
1105 CYANOGEN	20	10	—	—	—	—	
1106 CYANOGEN CHLORIDE	—	—	—	—	0.6	0.3	
1107 CYCLOHEXANOL	200	50	—	—	—	—	YES
1108 CYCLOHEXANONE ^c	100	25	—	—	—	—	YES
1109 CYCLOHEXYLAMINE	40	10	—	—	—	—	
1110 CYCLONITE	1.5	—	3	—	—	—	YES
1111 CYCLOPENTANE	1720	600	—	—	—	—	
1112 CYHEXATIN	5	—	—	—	—	—	
1113 DDT ^c	1	—	—	—	—	—	YES
1114 DECABORANE	0.3	0.05	0.9	0.15	—	—	YES
1116 DI-SEC-OCTYL-PHTHALATE	5	—	10	—	—	—	
1117 2,6-DI-TERT-BUTYL-P-CRESOL	10	—	—	—	—	—	
1118 DIAZINON	0.1	—	—	—	—	—	YES
1119 DIBUTYL PHOSPHATE	5	1	10	2	—	—	
1120 2-N-DIBUTYLAMINOETHANOL	14	2	—	—	—	—	YES
1121 1,1-DICHLORO-1-NITROETHANE	10	2	—	—	—	—	
1122 1,3-DICHLORO-5,5-DIMETHYLHYDANTOIN	0.2	—	0.4	—	—	—	

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1123 DICHLOROACETYLENE	--	--	--	--	0.4	0.1	
1125 P-DICHLOROBENZENE	450	75	665	110	--	--	
1126 1,1-DICHLOROETHANE ^e	400	100	--	--	--	--	
1127 DICHLOROETHYL ETHER	30	5	60	10	--	--	YES
1128 DICHLOROMONOFUOROMETHANE	40	10	--	--	--	--	
1129 1,3-DICHLOROPROPENE	5	1	--	--	--	--	YES
1130 2,2-DICHLOROPROPIONIC ACID	6	1	--	--	--	--	
1131 DICROTOPHOS (BIDRIN)	0.25	--	--	--	--	--	YES
1132 DICYCLOPENTADIENE	30	5	--	--	--	--	
1133 DICYCLOPENTADIENYL IRON	10	--	--	--	--	--	
1134 DIETHANOLAMINE	15	3	--	--	--	--	
1135 DIETHYL KETONE	705	200	--	--	--	--	
1136 DIETHYL PHTHALATE	5	--	--	--	--	--	
1137 DIETHYLAMINE	30	10	75	25	--	--	
1138 DIETHYLENE TRIAMINE	4	1	--	--	--	--	YES
1139 DIGLYCIDYL ETHER (DGE) ^d	0.5	0.1	--	--	--	--	
1140 DIISOBUTYL KETONE ^c	150	25	--	--	--	--	
1141 DIMETHYL 1,2-DIBROMO-2,2-DICHLOROETHYL PHOSPHATE	3	--	--	--	--	--	YES
1142 DIMETHYL SULFATE	0.5	0.1	--	--	--	--	YES
1143 DIMETHYLANILINE	25	5	50	10	--	--	YES

VW 000014552

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1144 DINITOLMIDE (3,5-DINITRO-O-TOLUAMIDE)	5	--	--	--	--	--	
1145 DIOXANE (DIETHYLENE DIOXIDE)	90	25	--	--	--	--	YES
1146 DIOXATHION (DELNAV)	0.2	--	--	--	--	--	YES
1147 DIPHENYLAMINE	10	--	--	--	--	--	
1148 DIPROPYL KETONE	235	50	--	--	--	--	
1149 DIPROPYLENE GLYCOL METHYL ETHER	600	100	900	150	--	--	YES
1150 DIQUAT	0.5	--	--	--	--	--	
1151 DISULFIRAM	2	--	--	--	--	--	
1152 DISULFOTON	0.1	--	--	--	--	--	
1153 DIURON	10	--	--	--	--	--	
1154 DIVINYL BENZENE	50	10	--	--	--	--	
1155 EMERY	10	--	--	--	--	--	
1156 ENDOSULFAN	0.1	--	--	--	--	--	YES
1158 EPICHLOROHYDRIN	8	2	--	--	--	--	YES
1159 ETHANOLAMINE	8	3	15	6	--	--	
1160 ETHION (NIALATE)	0.4	--	--	--	--	--	YES
1161 ETHYL ACRYLATE	20	5	100	25	--	--	YES
1162 ETHYL BENZENE	435	100	545	125	--	--	
1163 ETHYL BROMIDE	890	200	1110	250	--	--	
1164 ETHYL ETHER	1200	400	1500	500	--	--	

VW 000014553

TABLE 2-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1165 ETHYL MERCAPTAN	1	0.5	--	--	--	--	
1166 ETHYL SILICATE	85	10	--	--	--	--	
1167 ETHYLENE CHLOROHYDRIN	--	--	--	--	3	1	YES
1168 ETHYLENE DICHLORIDE (1,2-DICHLOROETHANE) ^d	4	1	8	2	--	--	
1169 ETHYLENE GLYCOL	--	--	--	--	125	50	
1170 ETHYLENE GLYCOL DINITRATE ^d	--	--	0.1	--	--	--	YES
			(20 min)				
1171 ETHYLIDENE NORBORNENE	--	--	--	--	25	5	
1172 N-ETHYLMORPHOLINE	23	5	--	--	--	--	YES
1173 FENAMIPHOS	0.1	--	--	--	--	--	YES
1174 FENSULFOTHION (DASANIT)	0.1	--	--	--	--	--	
1175 FENTHION	0.2	--	--	--	--	--	YES
1176 FERBAM	10	--	--	--	--	--	
1177 FERROVANADIUM DUST	1	--	3	--	--	--	
1178 FIBROUS GLASS DUST ^d	5	--	--	--	--	--	
1179 FLUORINE	2	1	4	2	--	--	
1180 FLUOROTRICHLOROMETHANE	--	--	--	--	5600	1000	
1181 FONOFOS	0.1	--	--	--	--	--	YES
1182 FORMAMIDE	30	20	45	30	--	--	
1183 FURFURAL	8	2	--	--	--	--	YES

VVV 000014554

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1184 FURFURYL ALCOHOL	40	10	60	15	--	--	YES
1185 GASOLINE	900	300	1500	500	--	--	
1186 GERMANIUM TETRAHYDRIDE	0.6	0.2	--	--	--	--	
1187 GLUTARALDEHYDE	--	--	--	--	0.8	0.2	
1188 GLYCERIN (MIST)	10	--	--	--	--	--	
1189 GLYCIDOL (2,3-EPOXY-1-PROPANOL)	75	25	--	--	--	--	
1190 GRAIN DUST (OAT, WHEAT, BARLEY)	4	--	--	--	--	--	
1191 GRAPHITE, NATURAL, RESPIRABLE	2.5	--	--	--	--	--	
1191A GRAPHITE, SYNTHETIC	10	--	--	--	--	--	
1192 GYPSUM, TOTAL DUST	10	--	--	--	--	--	
1194 N-HEPTANE	1600	400	2000	500	--	--	
1195 HEXACHLOROBUTADIENE	0.24	0.02	--	--	--	--	YES
1196 HEXACHLOROCYClopentadiene	0.1	0.01	--	--	--	--	
1197 HEXACHLOROETHANE ^e	10	1	--	--	--	--	YES
1198 HEXAFLUOROACETONE	0.7	0.1	--	--	--	--	YES
1200 N-HEXANE	180	50	--	--	--	--	
1201 HEXANE ISOMERS	1800	500	3600	1000	--	--	
1202 2-HEXANONE	20	5	--	--	--	--	
1203 HEXONE (METHYL ISOBUTYL KETONE)	205	50	300	75	--	--	
1204 HEXYLENE GLYCOL	--	--	--	--	125	25	

VVV 000014555

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1205 HYDRAZINE	0.1	0.1	--	--	--	--	YES
1206 HYDROGEN BROMIDE	--	--	--	--	10	3	
1207 HYDROGEN CYANIDE ^d	--	--	--	--	5	4.7	YES
					(10 min)	(10 min)	
1208 HYDROGEN FLUORIDE ^d	--	3	--	6	--	--	
1209 HYDROGEN SULFIDE ^b	14	10	21	15	--	--	
1210 HYDROGENATED TERPHENYLS	5	0.5	--	--	--	--	
1211 2-HYDROXYPROPYL ACRYLATE	3	0.5	--	--	--	--	YES
1212 INDENE	45	10	--	--	--	--	
1213 INDIUM & COMPOUNDS	0.1	--	--	--	--	--	
1214 IODOFORM	10	0.6	--	--	--	--	
1215 IRON OXIDE (DUST AND FUME)	5	--	--	--	--	--	
1216 IRON PENTACARBONYL	0.8	0.1	1.6	0.2	--	--	
1217 IRON SALTS (SOLUBLE)	1	--	--	--	--	--	
1218 ISOAMYL ALCOHOL	360	100	450	125	--	--	
1219 ISOBUTYL ALCOHOL	150	50	--	--	--	--	
1220 ISOCTYL ALCOHOL	270	50	--	--	--	--	YES
1221 ISOPHORONE ^d	23	4	--	--	--	--	
1222 ISOPHORONE DIISOCYANATE ^d	--	0.005	--	--	--	0.02	
						(10 min)	

VVV 000014556

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1223 2-ISOPROPOXYETHANOL	105	25	—	—	—	—	
1224 ISOPROPYL ACETATE	950	250	1185	310	—	—	
1225 ISOPROPYL ALCOHOL	980	400	1225	500	—	—	
1226 ISOPROPYL ETHER ^e	2100	500	—	—	—	—	
1227 ISOPROPYL GLYCIDYL ETHER ^b	240	50	360	75	—	—	
1228 ISOPROPYLAMINE	12	5	24	10	—	—	
1229 N-ISOPROPYLANILINE	10	2	—	—	—	—	YES
1230 KAOLIN, TOTAL DUST	10	—	—	—	—	—	
1231 KETENE	0.9	0.5	3	1.5	—	—	
1232 LIMESTONE, TOTAL DUST	10	—	—	—	—	—	
1233 MAGNESITE, TOTAL DUST	10	—	—	—	—	—	
1234 MAGNESIUM OXIDE FUME	10	—	—	—	—	—	
1235 MALATHION	10	—	—	—	—	—	YES
1236A MANGANESE, FUME	1	—	3	—	—	—	
1237 MANGANESE CYCLOPENTADIENYL TRICARBONYL	0.1	—	—	—	—	—	YES
1238 MANGANESE TETROXIDE	1	—	—	—	—	—	
1239 MARBLE, TOTAL DUST	10	—	—	—	—	—	
1240 MERCURY (ARYL AND INORGANIC COMPOUNDS) ^e	—	—	—	—	0.1	—	
1241 MERCURY (VAPOR)	0.05	—	—	—	—	—	YES
1242 MERCURY, (ORGANO) ALKYL COMPOUNDS	0.01	—	0.03	—	—	—	YES

VW 000014557

TABLE 2-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1243 MESITYL OXIDE	60	15	100	25	—	—	
1244 METHACRYLIC ACID	70	20	—	—	—	—	
1245 METHOMYL (LANNATE)	2.5	—	—	—	—	—	
1246 METHOXYCHLOR	10	—	—	—	—	—	
1247 4-METHOXYPHENOL	5	—	—	—	—	—	
1248 METHYL 2-CYANOACRYLATE	8	2	16	4	—	—	
1249 METHYL ACETATE	610	200	760	250	—	—	
1250 METHYL ACETYLENE/PROPADIENE MIXTURE	1800	1000	2250	1250	—	—	
1251 METHYL ACRYLONITRILE	3	1	—	—	—	—	YES
1252 METHYL ALCOHOL	260	200	310	250	—	—	YES
1253 METHYL BROMIDE	20	5	—	—	—	—	YES
1254 METHYL CHLORIDE	105	50	205	100	—	—	
1255 METHYL CHLOROFORM (1,1,1-TRICHLOROETHANE)	1900	350	2450	450	—	—	
1256 METHYL DEMETON	0.5	—	—	—	—	—	YES
1257 METHYL ETHYL KETONE PEROXIDE	—	—	—	—	1.5	0.2	
1258 METHYL FORMATE	250	100	375	150	—	—	
1259 METHYL IODIDE	10	2	—	—	—	—	YES
1260 METHYL ISOAMYL KETONE	240	50	—	—	—	—	
1261 METHYL ISOBUTYL CARBINOL	100	25	165	40	—	—	YES
1262 METHYL ISOPROPYL KETONE	705	200	—	—	—	—	

VVV 000014558

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1263 METHYL MERCAPTAN ^b	1	0.5	—	—	—	—	
1264 METHYL N-AMYL KETONE ^e	465	100	—	—	—	—	
1265 METHYL PARATHION ^c	0.2	—	—	—	—	—	YES
1266 METHYL SILICATE	6	1	—	—	—	—	
1267 ALPHA-METHYL STYRENE	240	50	485	100	—	—	
1268 METHYLCYCLOHEXANE	1600	400	—	—	—	—	
1269 METHYLCYCLOHEXANOL	235	50	—	—	—	—	
1270 O-METHYLCYCLOHEXANONE	230	50	345	75	—	—	YES
1271 METHYLCYCLOPENTADIENYL MN TRICARBONYL	0.2	—	—	—	—	—	YES
1272 METHYLENE BIS (4-CYCLOHEXYLSOCYANATE)	—	—	—	—	0.11	0.01	
1273 4,4'-METHYLENE BIS(2-CHLOROANILINE)	0.22	0.02	—	—	—	—	YES
1275 METRIBUZIN	5	—	—	—	—	—	
1276 MICA	3	—	—	—	—	—	
1277 MINERAL WOOL FIBER	10	—	—	—	—	—	
1278 MOLYBDENUM (INSOLUBLE COMPOUNDS)	10	—	—	—	—	—	
1279 MONOCROTOPHOS (AZODRIN)	0.25	—	—	—	—	—	
1280 MONOMETHYL ANILINE	2	0.5	—	—	—	—	YES
1281 MORPHOLINE	70	20	105	30	—	—	YES
1282 NAPHTHALENE	50	10	75	15	—	—	
1283 NICKEL (SOLUBLE COMPOUNDS)	0.1	—	—	—	—	—	

VW 000014559

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1284 NICKEL CARBONYL ^e	0.007	0.001	—	—	—	—	
1286 NITRIC ACID	5	2	10	4	—	—	
1287 P-NITROANILINE	3	—	—	—	—	—	YES
1288 P-NITROCHLOROBENZENE ^e	1	—	—	—	—	—	YES
1289 NITROGEN DIOXIDE ^d	—	—	1.8	1	—	—	
1290 NITROGLYCERIN ^d	—	—	0.1	—	—	—	YES
			(20 min)				
1291 2-NITROPROPANE	35	10	—	—	—	—	
1292 NITROTOLUENE	11	2	—	—	—	—	YES
1293 NONANE	1050	200	—	—	—	—	
1294 NUISANCE PARTICULATES, TOTAL DUST	10	—	—	—	—	—	
1295 OCTACHLORONAPHTHALENE	0.1	—	0.3	—	—	—	YES
1296 OCTANE	1450	300	1800	375	—	—	
1297 OIL MIST (MINERAL)	5	—	10	—	—	—	
1298 OSMIUM TETROXIDE	0.002	0.0002	0.006	0.0006	—	—	
1299 OXALIC ACID	1	—	2	—	—	—	
1300 OXYGEN DIFLUORIDE	—	—	—	—	0.1	0.05	
1301 OZONE	0.2	0.1	0.6	0.3	—	—	
1302 PARAFFIN WAX FUME	2	—	—	—	—	—	
1303 PARAQUAT, RESPIRABLE DUST	0.1	—	—	—	—	—	YES

VVV 000014560

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1304 PENTABORANE	0.01	0.005	0.03	0.015	—	—	
1305 PENTAERYTHRITOL, TOTAL DUST	10	—	—	—	—	—	
1306 PENTANE	1800	600	2250	750	—	—	
1307 2-PENTANONE (METHYL PROPYL KETONE)	700	200	875	250	—	—	
1308 PERCHLOROETHYLENE	340	50	1340	200	—	—	
1309 PERCHLORYL FLUORIDE	14	3	28	6	—	—	
1310 PERLITE	10	—	—	—	—	—	
1312 PETROLEUM DISTILLATES (NAPHTHA)	1600	400	—	—	—	—	
1313 PHENOTHIAZINE	5	—	—	—	—	—	YES
1314 PHENYL ETHER (VAPOR)*	7	1	—	—	—	—	
1315 PHENYL GLYCIDYL ETHER	6	1	—	—	—	—	
1316 PHENYL MERCAPTAN	2	0.5	—	—	—	—	
1317 PHENYLHYDRAZINE	20	5	45	10	—	—	YES
1318 PHENYLPHOSPHINE	—	—	—	—	0.25	0.05	
1319 PHORATE (THIMET)	0.05	—	0.2	—	—	—	YES
1320 PHOSDRIN (MEVINPHOS)	0.1	0.01	0.3	0.03	—	—	YES
1321 PHOSPHINE	0.4	0.3	1	1	—	—	
1322 PHOSPHORIC ACID	1	—	3	—	—	—	
1323 PHOSPHORUS OXYCHLORIDE	0.6	0.1	3	0.5	—	—	
1324 PHOSPHORUS PENTASULFIDE	1	—	3	—	—	—	

VVV 000014561

TABLE 2-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1325 PHOSPHORUS TRICHLORIDE	1.5	0.2	3	0.5	—	—	
1326 PHTHALIC ANHYDRIDE	6	1	—	—	—	—	
1327 M-PHTHALODINITRILE	5	—	—	—	—	—	
1328 PICLORAM	10	—	20	—	—	—	
1329 PICRIC ACID	0.1	—	0.3	—	—	—	YES
1330 PIPERAZINE DIHYDROCHLORIDE	5	—	—	—	—	—	
1331 PLASTER OF PARIS, TOTAL DUST	10	—	—	—	—	—	
1332 PLATINUM, METAL	1	—	—	—	—	—	
1333 PORTLAND CEMENT	10	—	—	—	—	—	
1334 POTASSIUM HYDROXIDE	—	—	—	—	2	—	
1335 PROPARGYL ALCOHOL	2	1	—	—	—	—	YES
1336 PROPIONIC ACID	30	10	45	15	—	—	
1337 PROPOXUR (BAYGON)	0.5	—	—	—	—	—	
1338 N-PROPYL ACETATE	840	200	1050	250	—	—	
1339 PROPYL ALCOHOL	500	200	625	250	—	—	YES
1340 N-PROPYL NITRATE	105	25	170	40	—	—	
1341 PROPYLENE DICHLORIDE	350	75	510	110	—	—	
1342 PROPYLENE GLYCOL DINITRATE	0.3	0.05	—	—	—	—	YES
1343 PROPYLENE GLYCOL MONOMETHYL ETHER	360	100	540	150	—	—	
1344 PROPYLENE OXIDE	50	20	—	—	—	—	

VW 000014562

TABLE 2-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1346 RESORCINOL	45	10	90	20	--	--	
1347 RHODIUM (METAL FUME & INSOLUBLE COMPOUNDS) ^e	0.1	--	--	--	--	--	
1348 RHODIUM (SOLUBLE SALTS) ^e	0.001	--	--	--	--	--	
1349 RONNEL	10	--	--	--	--	--	
1350 ROSIN CORE SOLDER PYROLYSIS PRODUCT (AS HCHO)	0.1	--	--	--	--	--	
1351 ROUGE, TOTAL DUST	10	--	--	--	--	--	
1352 SILICA, AMORPHOUS, DIATOMACEOUS EARTH	6	--	--	--	--	--	
1353 SILICA, AMORPHOUS, PRECIPITATED OR GEL	6	--	--	--	--	--	
1354 SILICA, CRYSTALLINE - CRISTOBALITE	0.05	--	--	--	--	--	
1355 SILICA, CRYSTALLINE QUARTZ, RESPIRABLE	0.1	--	--	--	--	--	
1356 SILICA, CRYSTALLINE TRIDYMITE	0.05	--	--	--	--	--	
1357 SILICA, CRYSTALLINE TRIPOLI (AS QUARTZ DUST)	0.1	--	--	--	--	--	
1358 SILICA, FUSED	0.1	--	--	--	--	--	
1359 SILICON	10	--	--	--	--	--	
1360 SILICON CARBIDE	10	--	--	--	--	--	
1361 SILICON TETRAHYDRIDE	7	5	--	--	--	--	
1362 SILVER (METAL DUST AND FUME) ^e	0.01	--	--	--	--	--	
1363 SOAPSTONE, TOTAL DUST	6	--	--	--	--	--	
1363A SOAPSTONE, RESPIRABLE DUST	3	--	--	--	--	--	
1364 SODIUM AZIDE	--	--	--	--	0.3	0.1	
1365 SODIUM BISULFITE	5	--	--	--	--	--	

VVV 000014563

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1366 SODIUM FLUOROACETATE	0.05	--	0.15	--	--	--	YES
1367 SODIUM HYDROXIDE	--	--	--	--	2	--	
1368 SODIUM METABISULFITE	5	--	--	--	--	--	
1369 STARCH, TOTAL DUST	10	--	--	--	--	--	
1371 STODDARD SOLVENT	525	100	--	--	--	--	
1372 STYRENE (PHENYLETHYLENE) ^c	215	50	425	100	--	--	
1373 SUBTILISINS (PROTEOLITIC ENZYMES)	--	--	--	--	0.00006	--	
1374 SUCROSE, TOTAL DUST	10	--	--	--	--	--	
1375 SULFUR DIOXIDE	5	2	10	5	--	--	
1376 SULFUR MONOCHLORIDE	--	--	--	--	6	1	
1377 SULFUR PENTAFLUORIDE	--	--	--	--	0.1	0.01	
1378 SULFUR TETRAFLUORIDE	--	--	--	--	0.4	0.1	
1379 SULFURYL FLUORIDE	20	5	40	10	--	--	
1380 SULPROFOS	1	--	--	--	--	--	
1381 TALC (NON-ASBESTIFORM)	2	--	--	--	--	--	
1382 TANTALUM (METAL AND OXIDE DUSTS)	5	--	10	--	--	--	
1383 TEMEPHOS	10	--	--	--	--	--	
1384 TERPHENYLS	--	--	--	--	5	0.5	
1385 1,1,2,2-TETRACHLOROETHANE	7	1	--	--	--	--	YES
1386 TETRAETHYL LEAD ^e	0.075	--	--	--	--	--	YES
1387 TETRAHYDROFURAN	590	200	735	250	--	--	
1388 TETRAMETHYL LEAD ^e	0.075	--	--	--	--	--	YES

VVV 000014564

TABLE Z-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1389 TETRASODIUM PYROPHOSPHATE	5	--	--	--	--	--	
1391 4,4'-THIOBIS (6-TERT-BUTYL-M-CRESOL)	10	--	--	--	--	--	
1392 THIOGLYCOLIC ACID	4	1	--	--	--	--	YES
1393 THIONYL CHLORIDE	--	--	--	--	5	1	
1394 TIN (ORGANIC COMPOUNDS)	0.1	--	--	--	--	--	YES
1395 TIN OXIDE	2	--	--	--	--	--	
1396 TITANIUM DIOXIDE	10	--	--	--	--	--	
1397 TOLUENE	375	100	560	150	--	--	
1398 TOLUENE 2,4-DIISOCYANATE	0.04	0.005	0.15	0.02	--	--	
1399 O-TOLUIDINE	9	2	--	--	--	--	YES
1400 P-TOLUIDINE	9	2	--	--	--	--	YES
1401 M-TOLUIDINE	9	2	--	--	--	--	YES
1402 TRIBUTYL PHOSPHATE	2.5	0.2	--	--	--	--	
1403 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	7600	1000	9500	1250	--	--	
1404 TRICHLOROACETIC ACID	7	1	--	--	--	--	
1405 1,2,4-TRICHLOROBENZENE	--	--	--	--	40	5	
1406 TRICHLOROETHYLENE ^d	--	25	--	--	--	--	
1407 1,2,3-TRICHLOROPROPANE	60	10	--	--	--	--	YES
1408 TRIETHYLAMINE	40	10	60	15	--	--	
1409 TRIMELLITIC ANHYDRIDE	0.04	0.005	--	--	--	--	
1410 TRIMETHYL PHOSPHITE	10	2	--	--	--	--	

VW 000014565

TABLE 2-4. All Substances Considered by OSHA for Proposed Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1411 TRIMETHYLAMINE	24	10	36	15	—	—	
1412 TRIMETHYLBENZENE	125	25	—	—	—	—	
1413 2,4,6-TRINITROTOLUENE (TNT)	0.5	—	—	—	—	—	YES
1414 TRIORTHOCRESYL PHOSPHATE	0.1	—	—	—	—	—	YES
1415 TRIPHENYL AMINE	5	—	—	—	—	—	
1416 TUNGSTEN & COMPOUNDS (INSOLUBLE)	5	—	10	—	—	—	
1417 TUNGSTEN & COMPOUNDS (SOLUBLE)	1	—	3	—	—	—	
1418 URANIUM (INSOLUBLE COMPOUNDS)	0.2	—	0.6	—	—	—	
1419 URANIUM (SOLUBLE COMPOUNDS) ^e	0.05	—	—	—	—	—	
1420 N-VALERALDEHYDE	175	50	—	—	—	—	
1421 VANADIUM (V2O5, DUST) ^b	0.05	—	—	—	—	—	
1422 VANADIUM (V2O5, FUME) ^b	0.05	—	—	—	—	—	
1423 VEGETABLE OIL MIST	10	—	—	—	—	—	
1424 VINYL ACETATE	30	10	60	20	—	—	
1425 VINYL BROMIDE	20	5	—	—	—	—	
1426 VINYL CYCLOHEXENE DIOXIDE	60	10	—	—	—	—	YES
1427 VINYL TOLUENE ^e	480	100	—	—	—	—	
1428 VINYLIDENE CHLORIDE	20	5	80	20	—	—	
1429 VM & P NAPHTHA	1350	300	—	—	—	—	
1430 WELDING FUMES (TOTAL PARTICULATE)	5	—	—	—	—	—	
1430a WOOD DUST, HARD WOOD	1	—	—	—	—	—	

VWV 000014566

TABLE Z-4. All Substances Considered by OSHA for Proposal: Revision or Addition of Limits^a

H.S. NO./ CHEMICAL NAME	8-HOUR TWA		SHORT-TERM LIMIT*		CEILING**		SKIN NOTATION
	MG/M3	PPM	MG/M3	PPM	MG/M3	PPM	
1430b WOOD DUST, SOFT WOOD	5	—	10	—	—	—	
1431 XYLENE (O,M,P-ISOMERS)	435	100	655	150	—	—	
1432 M-XYLENE-ALPHA,ALPHA'-DIAMINE	—	—	—	—	0.1	—	YES
1433 XYLIDINE	10	2	—	—	—	—	YES
1434 ZINC STEARATE	10	—	20	—	—	—	
1435 ZINC CHLORIDE FUME	1	—	2	—	—	—	
1436 ZINC CHROMATES (CrVI) ^e	—	—	—	—	0.1	—	
1437 ZINC OXIDE (FUME)	5	—	10	—	—	—	
1438 ZINC OXIDE, TOTAL DUST	10	—	—	—	—	—	
1439 ZIRCONIUM COMPOUNDS	5	—	10	—	—	—	

^a All proposed limits derive from the 1987-88 ACGIH TLVs, unless otherwise noted.

^b Proposed limit is based on 1987-88 ACGIH TLV because NIOSH REL for this substance was judged to be essentially equivalent to the TLV.

^c Proposed limit is based both on 1987-88 ACGIH TLV and the current NIOSH REL, which are identical.

^d Proposed limit is based on NIOSH REL.

^e Proposal retains existing PEL.

* Duration is 15 minutes, unless otherwise noted.

** Ceiling is a peak not to be exceeded at any time during the working day.

BILLING CODE 4510-26-C

VVV 000014567

