

ORDER OF THE STATE OF WISCONSIN  
NATURAL RESOURCES BOARD  
REPEALING, RENUMBERING, RENUMBERING AND AMENDING,  
AMENDING, REPEALING AND RECREATING AND CREATING RULES

The Wisconsin Natural Resources Board adopts an order to repeal NR 406.04(2)(f)3m. and (4)(a)4., 423.04, 445.02(3), (9) and (9m), 445.05(6)(g) and (7), 445.06(2), (3) and (5) and 468.20(1)(b) Note; to renumber NR 445.07, 445.08 and 448.02(1); to renumber and amend NR 406.04(4)(a)5. and 6., 445.02(1), (2), (4) to (8), (9g), (10) and (11) and 445.06 (title), (1) and (4); to amend NR 400.02(95), 406.04(2)(f)1. and (3)(a) and (c), 407.03(1)(sm)(intro.) and (2)(d), 407.05(4)(c)1. and 9.a. and b. and 10., Table 2 (title) and the table's footnote 8 of 407.05, 407.09(1)(c)1.b., 407.14(1) (intro.), 410.03(2)(g), 419.07(4)(b)3., (6)(a)1.b. and (7)(b), 422.083(1)(a), Note, (b) and Note and (4)(a), 423.035(1)(a), Note, (b) and Note, 438.03(1)(a) and (b), Table 1 (title) and the table's footnote 5 of 438.03(1), 439.03(4)(a)1., 445.01(1)(a) and (2), 445.02 (intro.), 445.03, 445.04 (title), (1)(intro.) and (a)2., (2) (intro.), (3)(a) and (b), (4)(intro.) and (a)2., (4r)(a), (5)(a) and (b) and (6)(a), 445.05 (title), (1)(a)2. and (4)(a)2., 446.02 (intro.), 447.02 (intro.), 448.02 (intro.), 449.02 (intro.), 484.04(23), 484.05(1) and 484.11(2)(b); to repeal and recreate NR 406.04(2)(f) 2. and 3., 445.01(1)(b), 445.04(7) and 445.05(8); and to create NR 400.02(162)(wm), 406.04(2)(f)1.b. Note, 406.04(3)(e), 407.03(2)(d) Note, 407.05, 407.14(1m)(e), 410.04(2)(b)5. and 6., 438.03(1)(am), Table 2 of 438.03(1), 445 Subchapter I (title), NR 445.01(1)(a) Note, 445.01(1)(b) Note, 445.02(1), (2), (3), (5), (6), (10) to (13), (16) and (17), 445 subchapter II (title), 445.04(intro.), 445.05(intro.), 445 Subchapter III (title) and 445.06 to 445.14, 445.15(2) and (3), 445.16 Note, 448.02(1) and 484.11(2)(c), relating to the control of hazardous air contaminants.

AM-34-02

Analysis Prepared by the Department of Natural Resources

Authorizing statutes: ss. 227.11(2)(a), 285.11(1), 285.17 and 285.27(2), Stats.

Statutes interpreted: ss. 285.11(10), 285.13(5), 285.17, 285.27(2), 285.63(4), 285.64, 285.67 and 285.69, Stats.

Regulations designed to protect the public from hazardous air contaminants were adopted by the Natural Resources Board and became effective in October of 1988. These regulations included permit requirements in chs. NR 406 and 407, annual emission inventory requirements in ch. NR 438 and emission limitations and compliance requirements in ch. NR 445 for over 400 hazardous air contaminants. Previous revisions to these regulations were adopted by the Board in 1991 and 1994 to incorporate the results of a special studies, and to add emission limitations for hazardous air contaminants known to cause chronic, non-carcinogenic health effects.

This proposed order will revise existing requirements, set new standards, and create permit and emission inventory reporting requirements for 148 hazardous air contaminants from stationary sources. This order will also improve the existing regulatory system and provide new alternative methods for demonstrating compliance. It requires new and modified sources to meet requirements upon startup and includes a compliance schedule for existing sources.

The goal of this action is twofold. First, it is to ensure that the public is adequately protected from the adverse health effects from hazardous air contaminants by using up to date scientific and medical information. Second, it reduces the overall regulatory burden for sources and the department by making the regulations easier to understand and clarifying expectations while streamlining the administrative process.

The consent of the Attorney General and the Revisor of Statutes will be requested for the incorporation by reference of a new standards document in ch. NR 484.

SECTION 1. NR 400.02(95) is amended to read:

NR 400.02(95) "Maximum theoretical emissions" means the quantity of air contaminants that theoretically could be emitted by a stationary source without control devices based on the design capacity or maximum production capacity of the source. When determining annual maximum theoretical emissions, a source shall be presumed to operate 8,760 hours per year unless its physical design precludes 8,760 hours of operation per year. Where a source's physical design restricts the number of hours it may operate, annual maximum theoretical emissions shall be calculated taking this restriction into account. In determining the maximum theoretical emissions of VOCs for a source, the design capacity or maximum production capacity shall include the use of raw materials, coatings and inks with the highest VOC content used in practice by the source. In determining the maximum theoretical emissions of a hazardous air contaminant for a source, the design capacity or maximum production capacity shall include the use of raw materials, coatings, inks and fuels with the highest hazardous air contaminant content used in practice by the source. Realistic operating conditions shall be taken into account in determining emissions under this subsection.

SECTION 2. NR 400.02(162)(wm) is created to read:

NR 400.02(162)(wm) Perchloroethylene (Tetrachloroethylene).

SECTION 3. NR 406.04(2)(f)1. is amended to read:

NR 406.04(2)(f)1. The maximum theoretical emissions from the source for any hazardous air contaminant listed in ~~Table 1 or Table 4~~ Table A, B or C of s. NR 445.04 s. NR 445.07 are not greater than the emission rate for the air contaminant listed in Table 1 or Table 4 in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.04 for the air contaminant s. NR 445.07 for the respective stack height or the owner or operator of the source meets the compliance demonstration and notification requirements of s. NR 445.08(7)(b).

SECTION 4. NR 406.04(2)(f)1.b. Note is created to read:

NR 406.04(2)(f)1. **Note:** Owners and operators of facilities emitting less than 3 tons of volatile organic compounds and 5 tons of particulate matter on an annual basis, or who engage in limited or no manufacturing activities, should refer to s. NR 445.11 prior to determining applicable requirements under this paragraph.

SECTION 5. NR 406.04(2)(f) 2. and 3. are repealed and recreated to read:

NR 406.04(2)(f)2. The source is not subject to a best available control technology or lowest achievable emission rate requirement in s. NR 445.07(1)(c), (2), (3) or (4).

3. The source does not combust fuel oil in a compression ignition internal combustion engine subject to a best available control technology requirement in s. NR 445.09(3)(a).

SECTION 6. NR 406.04(2)(f)3m. is repealed.

SECTION 7. NR 406.04(3)(a) and (c) are amended to read:

NR 406.04(3)(a) For the purpose of determining emissions under sub. (2)(f), the owner or operator of a source may rely on information on an approved material safety data sheet if the approved material safety data sheet lists a hazardous air contaminant listed in Tables 1 to 5 Table A, B or C of s. NR 445.04 s. NR 445.07 and the for any hazardous air contaminant listed with a standard expressed as an ambient air concentration in Tables 1, 2, 4 column (g) of Table A or 5 B of s. NR 445.04 s. NR 445.07 constitutes 1% (10,000 parts per million) or more of the material or the for any hazardous air contaminant listed with a standard expressed as a control requirement in column (i) of Table 3 A, B or C of s. NR 445.07 constitutes 0.1% (1,000 parts per million) or more of the material. If an approved material safety data sheet for a material is not classified as proprietary and does not list a hazardous air contaminant in Tables 1 to 5 Table A, B or C of s. NR 445.04 s. NR 445.07 at or above the amounts listed in this paragraph, the material will be presumed not to result in emissions of a hazardous air contaminant unless a hazardous air contaminant is formed in processing the material.

(c) For the purpose of determining emissions under sub. (2)(f), the owner or operator of a source is not required to consider indoor fugitive emissions in calculating emissions of any substance with a standard expressed as an ambient air concentration in Table 1, 2, 4 A, B or 5 C of s. NR 445.04 s. NR 445.07.

SECTION 7A. NR 406.04(3)(e) is created to read:

NR 406.04(3)(e) For the purposes of determining emissions under sub. (2)(f), the owner or operator of a source is not required to consider emissions of hazardous air contaminants associated with agricultural waste prior to the last day of the thirty-sixth calendar month after the effective date of this section... [revisor inserts date].

SECTION 8. NR 406.04(4)(a)4. is repealed.

SECTION 9. NR 406.04(4)(a)5. and 6. are renumbered NR 406.04(4)(a)4. and 5. and 406.04(4)(a)4., as renumbered, is amended to read:

NR 406.04(4)(a)4. The use will not result in a violation of any emission limit in chs. NR 405, 408, 409, and 415 to 436 and 445.

SECTION 10. NR 407.03(1)(sm)(intro.) is amended to read:

NR 407.03(1)(sm)(intro.) The following procedures for the remediation or disposal of soil or water contaminated with organic compounds, provided the potential to emit, considering emission control devices, for any hazardous air contaminant listed in Table 1 A to Table 5 C of s. NR 445.04 s. NR 445.07 is not greater than the emission rate listed in Table 1 A to Table 5 C of s. NR 445.04 s. NR 445.07 for the air contaminant at the respective stack height, the procedure is not a major source and the procedure is not subject to any standard or regulation under section 111 or 112 of the act (42 USC 7411 or 7412):

SECTION 11. NR 407.03(2)(d) is amended to read:

NR 407.03(2)(d) The maximum theoretical emissions from the source for any hazardous air contaminant listed in Table 1, 2, 3, 4 or 5 A, B or C of s. NR 445.04 s. NR 445.07 do not exceed the emission rate listed in the table for the hazardous air contaminant for the respective stack height. For the purposes of determining emissions under this paragraph, the owner or operator of a source is not required to consider emissions of hazardous air contaminants associated with agricultural waste prior to the last day of the thirty-sixth calendar month after the effective date of this section. [revisor inserts date].

SECTION 12. NR 407.03(2)(d) Note is created to read:

NR 407.03(2)(d) Note: Owners and operators of facilities emitting less than 3 tons of volatile organic compounds and 5 tons of particulate matter on an annual basis, or who engage in limited or no manufacturing activities, should refer to s. NR 445.11 prior to determining applicable requirements under this section.

SECTION 13. NR 407.05(4)(c)1. is amended to read:

NR 407.05(4)(c)1. The maximum theoretical emissions of all air contaminants from all emissions units, operations and activities except for those exempted under subd. 9. or 10. Fugitive emissions from emissions units, operations and activities shall be included in the permit application in the same manner as stack emissions, regardless of whether the source category in question is included in the list of sources contained in the definition of major source. Maximum theoretical fugitive emissions shall be calculated using average operating conditions and average weather conditions. Only sources ~~which~~ that manufacture or ~~process~~ treat pesticides, rodenticides, insecticides, herbicides ~~or~~, fungicides or pharmaceuticals shall include emissions of air contaminants identified as ~~pesticides, rodenticides, insecticides, herbicides and fungicides~~ falling within these categories in Table 2, or Table 3 for calendar years 2004 and later, in their permit applications. When preparing its application, the owner or operator of a facility may rely on information in an approved material safety data sheet. Trace contaminants need not be reported if they constitute less than 1% (10,000 parts per million) of the material, or 0.1% (1,000 parts per million) of the material if the air contaminant is listed with a control requirement in column (i) of Table 3 A, B or C of s. NR 445.04 s. NR 445.07, unless a hazardous air contaminant is formed in processing the material.

SECTION 14. NR 407.05(4)(c)9.a., and b. and 10. are amended to read:

NR 407.05(4)(c)9.a. Any emissions unit, operation or activity that has, for each air contaminant, maximum theoretical emissions ~~which that~~ are less than the level specified in Table 2, or Table 3 for calendar years 2004 and later. Multiple emissions units, operations and activities that perform identical or similar functions shall be combined in determining the applicability of the exemption under this subparagraph.

b. If the maximum theoretical emissions of any air contaminants listed in Table 2, or Table 3 for calendar years 2004 and later from all emission units, operations or activities at a facility are less than 5 times the level specified in Table 2, or Table 3 for calendar years 2004 and later, for those air contaminants, any emissions unit, operation or activity that emits only those air contaminants.

10. For any emissions unit, operation or activity that is included in the application, the applicant does not need to include information on any air contaminant if the maximum theoretical emissions of the air contaminant are less than the level for that air contaminant listed in Table 2, or Table 3 for calendar years 2004 and later, or if the maximum theoretical emissions of any air contaminant listed in Table 2, or Table 3 for calendar years 2004 and

later, from all emission units, operations or activities at a facility are less than 5 times the level specified in Table 2, or Table 3 for calendar years 2004 and later, for that air contaminant. Multiple emissions units, operations and activities that perform identical or similar functions shall be combined in determining the applicability of this exemption.

SECTION 15. Table 2 (title) and the table's footnote 8 of NR 407.05 are amended to read:

**Table 2**  
**Levels of Air Contaminants for Determining Need for Inclusion in Permit Applications**  
**for Calendar Years 2003 and Earlier**

<sup>8</sup>Glycol ethers means any compound which can be described by the following chemical formula:  $R(OCH_2CH_2)_n-OR'$

where:  $n = 1, 2$  or  $3$

$R =$  alkyl C7 or less

or  $R =$  phenyl or alkyl substituted phenyl

$R' =$  H, alkyl C7 or less or

$OR' =$  ester, sulfate, phosphate, nitrate or sulfonate

(i.e. any group that will readily come off) include mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol,  $R-(OCH_2CH_2)_n-OR'$

where:

$n = 1, 2$  or  $3$

$R =$  alkyl C7 or less or

$R =$  phenyl or alkyl substituted phenyl

$R' =$  H or alkyl C7 or less or  $OR'$  consists of carboxylic acid ester, sulfate, phosphate, nitrate or sulfonate.

SECTION 16. Table 3 of NR 407.05 is created to read:

**Table 3**  
**Levels of Air Contaminants for Determining Need for Inclusion in Permit Applications**  
**for Calendar Years 2004 and Later**

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number <sup>7</sup>	Inclusion Level (lbs/yr)
Acetaldehyde	2, 3	75-07-0	80.8
Acetamide	2	60-35-5	2,000
Acetic acid	3	64-19-7	1,155
Acetic anhydride	3	108-24-7	982
Acetonitrile	2, 3	75-05-8	2,000
Acetophenone	2	98-86-2	2,000
2-Acetylaminofluorene	2	53-96-3	2,000
Acrolein	2, 3	107-02-8	15
Acrylamide	2, 3	79-06-1	0.137
Acrylic acid	2, 3	79-10-7	17.8
Acrylonitrile	2, 3	107-13-1	2.61
Adipic Acid	3	124-04-9	235
Adiponitrile	3	111-69-3	416
Adriamycin	3	23214-92-8	0.243
Aflatoxins	3	1402-68-2	0.243
Aldrin	3, 6	309-00-2	11.8
Allyl alcohol	3	107-18-6	55.9
Allyl chloride	2, 3	107-05-1	147
Allyl glycidyl ether	3	106-92-3	220
Aluminum alkyls and soluble salts, as Al	3	7429-90-5 *	94.1

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number <sup>7</sup>	Inclusion Level (lbs/yr)
Aluminum pyro powders, as Al	3	7429-90-5 *	235
o-Aminoazotoluene (2-Aminoazotoluene)	3	97-56-3	0.162
4-Aminobiphenyl	2, 3	92-67-1	0.0296
Amitrole	3, 6	61-82-5	0.658
Ammonia	3	7664-41-7	819
Ammonium perfluorooctanoate	3	3825-26-1	0.471
Aniline	2, 3	62-53-3	358
o-Anisidine and o-anisidine hydrochloride (mixtures and isomers)	2, 3	29191-52-4 *	4.44
Antimony and compounds, as Sb	2, 3	7440-36-0 *	23.5
Antimony trioxide	3	1309-64-4	3.55
ANTU	3, 6	86-88-4	14.1
Arsenic, elemental and inorganic compounds, as As	2, 3	7440-38-2 *	0.0413
Arsine	2, 3	7784-42-1	0.888
Asbestos, all forms	2, 3	1332-21-4 *	0.243
Atrazine	3, 6	1912-24-9	235
Azathioprine	3	446-86-6	0.348
Azinphos-methyl	3, 6	86-50-0	9.41
Barium, soluble compounds, as Ba	3	7440-39-3 *	23.5
Benomyl	3, 6	17804-35-2	471
Benz(a)anthracene	3	56-55-3	1.62
Benzene	2, 3	71-43-2	22.8
Benzidine	2, 3	92-87-5	0.00265
Benzo(b)fluoranthene	2, 3	205-99-2	0.243
Benzo(j)fluoranthene	3	205-82-3	0.243
Benzo(k)fluoranthene	3	207-08-9	0.243
Benzo(a)pyrene	3	50-32-8	0.162
Benzotrichloride	2, 3	98-07-7	0.243
Benzoyl chloride	3	98-88-4	188
Benzoyl peroxide	3	94-36-0	235
Benzyl acetate	3	140-11-4	2,000
Benzyl chloride	2, 3	100-44-7	244
Beryllium and beryllium compounds, as Be	2, 3	7440-41-7 *	0.074
Biphenyl	2, 3	92-52-4	59.4
Bischloroethyl nitrosourea	3	154-93-8	0.243
N,N-Bis (2-chloroethyl)-2-naphthylamine (Chlornaphazine)	3	494-03-1	0.243
Bis(chloromethyl) ether (BCME) and technical grade	2, 3	542-88-1	0.243
Bis(2-dimethylaminoethyl) ether (DMAEE)	3	3033-62-3	15.4
Bismuth telluride, as Bi <sub>2</sub> Te <sub>3</sub> : Se-Doped	3	1304-82-1	235
Borates, tetra, sodium salts, decahydrate	3	1303-96-4 *	235
Borates, tetra, sodium salts, pentahydrate	3	1303-96-4 *	47.1
Boron tribromide	3	10294-33-4	670
Boron trifluoride	3	7637-07-2	181
Bromacil	3, 6	314-40-9	471
Bromine	3	7726-95-6	30.8
Bromine pentafluoride	3	7789-30-2	33.7
Bromodichloromethane	3	75-27-4	4.8
Bromoform	2, 3	75-25-2	243
1,3-Butadiene	2, 3	106-99-0	0.635
2-Butoxyethanol (Ethylene glycol monobutyl ether; EGBE; butyl cellosolve)	3	111-76-2	2,000
n-butyl alcohol (n-Butanol)	3	71-36-3	2,000
n-Butyl acrylate	3	141-32-2	493
n-Butylamine	3	109-73-9	978
Butylated hydroxyanisole (BHA)	3	25013-16-5	2,000
tert-Butyl chromate, as Cr	2, 3	1189-85-1	0.0148
n-Butyl glycidyl ether (BGE)	3	2426-08-6	2,000
n-Butyl lactate	3	138-22-7	1,407
o-sec-Butylphenol	3	89-72-5	1,446
p-tert-Butyltoluene	3	98-51-1	285
C.I. Basic Red 9 monohydrochloride	3	569-61-9	2.5
Cadmium and cadmium compounds, as Cd	2, 3	7440-43-9 *	0.0987
Calcium cyanamide	2, 3	156-62-7	23.5
Calcium hydroxide	3	1305-62-0	235
Calcium oxide	3	1305-78-8	94.1
Camphor (synthetic)	3	76-22-2	586
Caprolactam (aerosol and vapor)	3	105-60-2	1,089
Captafol	3, 6	2425-06-1	4.71

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number <sup>7</sup>	Inclusion Level (lbs/yr)
Captan	2, 3, 6	133-06-2	235
Carbaryl	2, 3, 6	63-25-2	235
Carbofuran	3, 6	1563-66-2	4.71
Carbon monoxide	1	630-08-0	2,000
Carbon black	3	1333-86-4	165
Carbon disulfide	2, 3	75-15-0	1,465
Carbon tetrabromide	3	558-13-4	63.8
Carbon tetrachloride	2, 3, 5	56-23-5	11.8
Carbonyl fluoride	3	353-50-4	254
Carbonyl sulfide	2	463-58-1	2,000
Catechol (Pyrocatechol)	2, 3	120-80-9	1,060
Refractory Ceramic Fibers (respirable size)	3	*	0.243
Cesium hydroxide	3	21351-79-1	94.1
Chloramben	2	133-90-4	2,000
Chlorambucil	3	305-03-3	0.00137
Chlordane	2, 3, 6	57-74-9	23.5
Chlorendic acid	3	115-28-6	6.83
Chlorinated camphene (Toxaphene)	2, 3, 6	8001-35-2	0.555
Chlorinated diphenyl oxide	3	55720-99-5	23.5
Chlorinated paraffins (C12; 60% chlorine)	3	108171-26-2 *	7.11
Chlorine	2, 3	7782-50-5	68.2
Chlorine dioxide	3	10049-04-4	13
Chlorine trifluoride	3	7790-91-2	24.7
Chloroacetic acid	2	79-11-8	2,000
2-Chloroacetophenone	2, 3	532-27-4	14.9
Chlorobenzene (Monochlorobenzene)	2, 3	108-90-7	2,000
Chlorobenzilate	2	510-15-6	2,000
o-Chlorobenzylidene malononitrile	3	2698-41-1	25.2
1-Chloro-1,1-difluoroethane (Hydrochlorofluorocarbon-142b; HCFC-142b; R-142b)	3, 5	75-68-3	2,000
Chlorodifluoromethane (Hydrochlorofluorocarbon-22; HCFC-22; R-22)	3, 5	75-45-6	2,000
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)	3	13010-47-4	0.243
Chlorofluorocarbon-11 (CFC-11; R-11; Trichlorofluoromethane)	5	75-69-4	2,000
Chlorofluorocarbon-111 (CFC-111)	5	954-56-3	2,000
Chlorofluorocarbon-112 (CFC-112)	5	76-12-0	2,000
Chlorofluorocarbon-113 (CFC-113; R-113; Trichlorotrifluoroethane)	5	76-13-1	2,000
Chlorofluorocarbon-114 (CFC-114; R-114; Dichlorotetrafluoroethane)	5	76-14-2	2,000
Chlorofluorocarbon-115 (CFC-115; R-115; Monochloropentafluoroethane)	5	76-15-3	2,000
Chlorofluorocarbon-12 (CFC-12; R-12; Dichlorodifluoromethane)	5	75-71-8	2,000
Chlorofluorocarbon-13 (CFC-13; R-13; Chlorotrifluoromethane)	5	75-72-9	2,000
Chlorofluorocarbon-211 (CFC-211; R-211)	5	422-78-6	2,000
Chlorofluorocarbon-212 (CFC-212; R-212)	5	3182-26-1	2,000
Chlorofluorocarbon-213 (CFC-213; R-213)	5	165-97-7	2,000
Chlorofluorocarbon-214 (CFC-214; R-214)	5	29255-31-0	2,000
Chlorofluorocarbon-215 (CFC-215; R-215)	5	4259-43-2	2,000
Chlorofluorocarbon-216 (CFC-216; R-216)	5	661-97-2	2,000
Chlorofluorocarbon-217 (CFC-217; R-217)	5	422-86-6	2,000
Chloroform	2, 3	67-66-3	7.73
Chloromethyl methyl ether (CMME)	2, 3	107-30-2	0.243
1-Chloro-1-nitropropane	3, 6	600-25-9	476
Chloropicrin (Trichloronitromethane)	3, 6	76-06-2	31.6
beta-Chloroprene	2, 3	126-99-8	0.243
o-Chlorostyrene	3	2039-87-4	2,000
o-Chlorotoluene	3	95-49-8	2,000
Chlorpyrifos	3, 6	2921-88-2	9.41
Chromium (metal) and compounds other than Chromium (VI)	2, 3	7440-47-3 *	23.5
Chromium (VI): Chromic acid mists and dissolved Cr (VI) aerosols, as Cr	2, 3	7440-47-3 *	0.0148
Chromium (VI): compounds and particulates	2, 3	7440-47-3 *	0.0148
Chromyl chloride, as Cr	2, 3	14977-61-8	0.0148
Cobalt, elemental, and inorganic compounds, as Co	2, 3	7440-48-4 *	0.941
Coke oven emissions	2, 3	*	0.287
Copper and compounds, dusts and mists, as Cu	3	7440-50-8 *	47.1
Copper and compounds, fume, as Cu	3	7440-50-8 *	9.41
p-Cresidine	3	120-71-8	4.13
Cresol (mixtures and isomers)	2, 3	1319-77-3 *	1,041



Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number <sup>7</sup>	Inclusion Level (lbs/yr)
Crotonaldehyde	3	4170-30-3 *	56.3
Cruformate	3, 6	299-86-5	235
Cumene (Isopropyl benzene)	2, 3	98-82-8	2,000
Cyanamide	3	420-04-2	94.1
Cyanides, (inorganics), as CN	2, 3	143-33-9 *	327
Cyanogen	3	460-19-5	1,002
Cyanogen chloride	3	506-77-4	49.3
Cyclohexanol	3	108-93-0	2,000
Cyclohexanone	3	108-94-1	2,000
Cyclohexylamine	3	108-91-8	1,909
Cyclonite	3	121-82-4	23.5
Cyclopentadiene	3	542-92-7	2,000
Cyclophosphamide	3	50-18-0	1.05
Cyhexatin	3, 6	13121-70-5	235
2,4-D, salts and esters	2	94-75-7 *	2,000
Dacarbazine	3	4342-03-4	0.0127
DDE	2	72-55-9	2,000
Demeton	3, 6	8065-48-3	4.97
Diacetone alcohol	3	123-42-2	2,000
2,4-Diaminoanisole sulfate	3	39156-41-7	48
2,4-Diaminotoluene (Toluene-2,4-diamine)	2, 3	95-80-7 *	0.162
Diazinon	3, 6	333-41-5	4.71
Diazomethane	2, 3	334-88-3	16.2
Dibenz(a,h)acridine	2, 3	226-36-8	1.62
Dibenz(a,j)acridine	2, 3	224-42-0	1.62
Dibenz(a,h)anthracene	2, 3	53-70-3	0.148
7H-Dibenzo(c,g)carbazole	2, 3	194-59-2	0.162
Dibenzofurans	2	132-64-9	2,000
Dibenzo(a,e)pyrene	2, 3	192-65-4	0.162
Dibenzo(a,h)pyrene	2, 3	189-64-0	0.0162
Dibenzo(a,i)pyrene	2, 3	189-55-9	0.0162
Dibenzo(a,l)pyrene	2, 3	191-30-0	0.0162
Diborane	3	19287-45-7	5.33
1,2-Dibromo-3-chloropropane (DBCP)	2, 3	96-12-8	0.0935
1,2-Dibromoethane (Ethylene dibromide; EDB)	2, 3	106-93-4	0.808
2-N-Dibutylaminoethanol	3	102-81-8	167
Dibutylphenyl phosphate	3	2528-36-1	165
Dibutyl phthalate (Di-n-butyl phthalate)	2, 3	84-74-2	235
o-Dichlorobenzene (1,2-Dichlorobenzene)	3	95-50-1	2,000
p-Dichlorobenzene (1,4-Dichlorobenzene)	2, 3	106-46-7	16.2
3,3'-Dichlorobenzidine	2, 3	91-94-1	0.523
1,3-Dichloro-5,5-dimethyl hydantoin	3	118-52-5	9.41
Dichlorodiphenyltrichloroethane (DDT)	3	50-29-3	1.83
1,1-Dichloroethane (Ethylidene dichloride)	2, 3	75-34-3	2,000
1,2-Dichloroethane (Ethylene dichloride; EDC)	2, 3	107-06-2	6.83
Dichloroethyl ether (Bis(2-chloroethyl)ether)	2, 3	111-44-4	1,376
1,2-Dichloroethylene	3	540-59-0	2,000
1,1-Dichloro-1-nitroethane	3	594-72-9	554
1,3-Dichloropropene	2, 3, 6	542-75-6	44.4
2,2-Dichloropropionic acid	3, 6	75-99-0	235
Dichlorvos	2, 3, 6	62-73-7	8.88
Dicrotophos	3, 6	141-66-2	11.8
Dicyclopentadiene	3	77-73-6	1,272
Dieldrin	3, 6	60-57-1	11.8
Diethanolamine	2, 3	111-42-2	94.1
Diethylamine	3	109-89-7	704
2-Diethylaminoethanol	3	100-37-8	451
Diethylene triamine	3	111-40-0	199
Diethyl hexyl phthalate (Bis(2-ethyl hexyl) phthalate; Di-sec-octyl phthalate; DEHP)	2, 3	117-81-7	235
Diethyl phthalate	3	84-66-2	235
Diethylstilbestrol (DES)	3	56-53-1	0.00178
Diethyl sulfate	2, 3	64-67-5	0.243
1,1-Difluoroethane	3	75-37-6	2,000
Diglycidyl ether (DGE)	3	2238-07-5	25
Diglycidyl resorcinol ether	3	101-90-6	0.363
1,8-Dihydroxyanthraquinone (Danthron)	3	117-10-2	8.08

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number <sup>7</sup>	Inclusion Level (lbs/yr)
Diisobutyl ketone	3	108-83-8	2,000
Diisopropylamine	3	108-18-9	974
N,N-Dimethyl acetamide	3	127-19-5	1,677
Dimethylamine	3	124-40-3	434
4-Dimethylaminoazobenzene	2, 3	60-11-7	0.137
Dimethylaniline (N,N-Dimethylaniline)	2, 3	121-69-7	1,166
3,3'-Dimethylbenzidine (o-Tolidine)	2, 3	119-93-7	0.243
Dimethyl carbamoyl chloride	2, 3	79-44-7	0.048
Dimethylethoxysilane	3	14857-34-2	100
N,N-Dimethylformamide	2, 3	68-12-2	533
1,1-Dimethylhydrazine	2, 3	57-14-7	0.243
Dimethylphthalate	2, 3	131-11-3	235
Dimethyl sulfate	2, 3	77-78-1	0.243
Dinitolmide	3	148-01-6	235
Dinitrobenzene (mixtures and isomers)	3	528-29-0 *	48.5
Dinitro-o-cresol (4,6-Dinitro-o-cresol)	2, 3, 6	534-52-1	9.41
2,4-Dinitrophenol	2	51-28-5	2,000
Dinitrotoluene (mixtures and isomers)	2, 3	25321-14-6 *	9.41
1,4-Dioxane (1,4-Diethylene oxide)	2, 3	123-91-1	23.1
Dioxathion	3, 6	78-34-2	9.41
Diquat, respirable dust (various compounds) (Diquat dibromide)	3, 6	2764-72-9 *	4.71
Diquat, total dust (various compounds) (Diquat dibromide)	3, 6	2764-72-9 *	23.5
Direct black 38 (Benzidine-based dye)	3	1937-37-7	0.0846
Direct blue 6 (Benzidine-based dye)	3	2602-46-2	0.0846
Disperse Blue 1	3	2475-45-8	137
Disulfiram	3	97-77-8	94.1
Disulfoton	3, 6	298-04-4	4.71
Divinyl benzene (mixtures and isomers)	3	1321-74-0 *	2,000
Endosulfan	3, 6	115-29-7	4.71
Endrin	3, 6	72-20-8	4.71
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	2, 3	106-89-8	17.8
EPN	3, 6	2104-64-5	4.71
1,2-Epoxybutane (1,2-Butylene oxide)	2, 3	106-88-7	355
Ethanolamine	3	141-43-5	353
Ethion	3, 6	563-12-2	18.8
2-Ethoxyethanol (Ethylene glycol monoethyl ether; EGEE; cellosolve)	3	110-80-5	867
2-Ethoxyethyl acetate (Ethylene glycol monoethyl ether acetate; EGEEA; cellosolve acetate)	3	111-15-9	1,272
Ethyl acrylate	2, 3	140-88-5	963
Ethylamine (Ethanamine)	3	75-04-7	434
Ethyl amyl ketone	3	541-85-5	2,000
Ethyl benzene	2, 3	100-41-4	2,000
Ethyl bromide	3	74-96-4	1,049
Ethyl tert-butyl ether (ETBE)	3	637-92-3	983
Ethyl butyl ketone	3	106-35-4	2,000
Ethyl chloride (Chloroethane)	2, 3	75-00-3	2,000
Ethyl cyanoacrylate	3	7085-85-0	48.2
Ethylene chlorohydrin	3	107-07-3	215
Ethylenediamine	3	107-15-3	1,157
Ethylene glycol vapor and aerosol	2, 3	107-21-1	2,000
Ethylene oxide	2, 3	75-21-8	2.02
Ethylene thiourea	2, 3	96-45-7	13.7
Ethylenimine (Aziridine)	2, 3	151-56-4	41.5
Ethylidene norbornene	3	16219-75-3	1,608
N-Ethylmorpholine	3	100-74-3	1,108
Ethyl silicate	3	78-10-4	2,000
Fenamiphos	3	22224-92-6	4.71
Fensulfothion	3, 6	115-90-2	4.71
Fenthion	3, 6	55-38-9	9.41
Fine mineral fibers (includes mineral fiber emissions from facilities manufacturing or processing glass, rock or slag fibers, or other mineral derived fibers, of average diameter 1 micrometer or less)	2	*	2,000
Flour Dust (inhalable fraction)	3	*	23.5
Fluorides, (inorganics), as F	3	*	118
Fluorine	3	7782-41-4	73.1
Fonofos	3, 6	944-22-9	4.71
Formaldehyde	2, 3	50-00-0	13.7

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number <sup>7</sup>	Inclusion Level (lbs/yr)
Formamide	3	75-12-7	867
Formic acid	3	64-18-6	443
Furan	3	110-00-9	0.243
Furfural	3	98-01-1	370
Furfuryl alcohol	3	98-00-0	1,888
Germanium tetrahydride	3	7782-65-2	29.5
Glutaraldehyde	3	111-30-8	13.4
Glycidol	3	556-52-5	0.243
Glycol ethers <sup>8</sup>	2	*	2,000
Graphite (all forms except graphite fiber)	3	7782-42-5 *	94.1
Halon-1211 (bromochlorodifluoromethane)	5	353-59-3	2,000
Halon-1301 (bromotrifluoromethane)	5	75-63-8	2,000
Halon-2402 (dibromotetrafluoroethane)	5	124-73-2	2,000
Heptachlor and heptachlor epoxide	2, 3, 6	76-44-8	2.35
Hexachlorobenzene (HCB)	2, 3	118-74-1	0.0941
Hexachlorobutadiene	2, 3, 6	87-68-3	10
Hexachlorocyclopentadiene	2, 3, 6	77-47-4	5.25
Hexachloroethane	2	67-72-1	44.4
Hexachloronaphthalene	3	1335-87-1	9.41
Hexamethyl phosphoramide	2, 3	680-31-9	0.243
Hexamethylene-1,6-diisocyanate (HDI)	2, 3	822-06-0	0.178
n-Hexane	2, 3	110-54-3	2,000
1,6-Hexanediamine	3	124-09-4	112
1-Hexene	3	592-41-6	2,000
sec-Hexyl acetate	3	108-84-9	2,000
Hexylene glycol	3	107-41-5	2,000
Hydrazine and hydrazine sulfate	2, 3	302-01-2 *	0.0363
Hydrochlorofluorocarbon-121 (HCFC-121)	5	*	2,000
Hydrochlorofluorocarbon-122 (HCFC-122)	5	*	2,000
Hydrochlorofluorocarbon-123 (HCFC-123; R-123)	5	306-83-2 *	2,000
Hydrochlorofluorocarbon-124 (HCFC-124; R-124)	5	63938-10-3 *	2,000
Hydrochlorofluorocarbon-131 (HCFC-131)	5	*	2,000
Hydrochlorofluorocarbon-132b (HCFC-132b)	5	1649-08-7	2,000
Hydrochlorofluorocarbon-133a (HCFC-133a)	5	75-88-7	2,000
Hydrochlorofluorocarbon-141b (HCFC-141b; R-141b)	5	1717-00-6	2,000
Hydrochlorofluorocarbon-21 (HCFC-21; Dichlorofluoromethane)	5	75-43-4	2,000
Hydrochlorofluorocarbon-221 (HCFC-221)	5	*	2,000
Hydrochlorofluorocarbon-222 (HCFC-222)	5	*	2,000
Hydrochlorofluorocarbon-223 (HCFC-223)	5	*	2,000
Hydrochlorofluorocarbon-224 (HCFC-224)	5	*	2,000
Hydrochlorofluorocarbon-225ca (HCFC-225ca)	5	422-56-0	2,000
Hydrochlorofluorocarbon-225cb (HCFC-225cb)	5	507-55-1	2,000
Hydrochlorofluorocarbon-226 (HCFC-226)	5	*	2,000
Hydrochlorofluorocarbon-231 (HCFC-231)	5	*	2,000
Hydrochlorofluorocarbon-232 (HCFC-232)	5	*	2,000
Hydrochlorofluorocarbon-233 (HCFC-233)	5	*	2,000
Hydrochlorofluorocarbon-234 (HCFC-234)	5	*	2,000
Hydrochlorofluorocarbon-235 (HCFC-235)	5	*	2,000
Hydrochlorofluorocarbon-241 (HCFC-241)	5	*	2,000
Hydrochlorofluorocarbon-242 (HCFC-242)	5	*	2,000
Hydrochlorofluorocarbon-243 (HCFC-243)	5	*	2,000
Hydrochlorofluorocarbon-244 (HCFC-244)	5	*	2,000
Hydrochlorofluorocarbon-251 (HCFC-251)	5	*	2,000
Hydrochlorofluorocarbon-252 (HCFC-252)	5	*	2,000
Hydrochlorofluorocarbon-253 (HCFC-253)	5	*	2,000
Hydrochlorofluorocarbon-261 (HCFC-261)	5	*	2,000
Hydrochlorofluorocarbon-262 (HCFC-262)	5	*	2,000
Hydrochlorofluorocarbon-271 (HCFC-271)	5	*	2,000
Hydrochlorofluorocarbon-31 (HCFC-31; R-31; Chlorofluoromethane)	5	593-70-4	2,000
Hydrogenated terphenyls	3	61788-32-7	232
Hydrogen bromide	3	10035-10-6	649
Hydrogen chloride (Hydrochloric acid; Muriatic acid)	2, 3, 4	7647-01-0	355
Hydrogen cyanide	2, 3	74-90-8	340
Hydrogen fluoride (Hydrofluoric acid)	2, 3	7664-39-3	161
Hydrogen peroxide	3	7722-84-1	65.5
Hydrogen sulfide	3	7783-06-4	656
Hydroquinone	2, 3	123-31-9	94.1

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number <sup>7</sup>	Inclusion Level (lbs/yr)
2-Hydroxypropyl acrylate	3	999-61-1	125
Indeno(1,2,3-cd)pyrene	2, 3	193-39-5	1.62
Indium	3	7440-74-6	4.71
Iodine	3	7553-56-2	67.9
Iron dextran complex	3	9004-66-4	0.243
Iron oxide dust and fume, as Fe	3	1309-37-1 *	235
Iron salts, soluble, as Fe	3	*	47.1
Isobutyl alcohol	3	78-83-1	2,000
Isocetyl alcohol	3	26952-21-6	2,000
Isophorone	2, 3	78-59-1	1,849
Isophorone diisocyanate	3	4098-71-9	2.14
Isoprene	3	78-79-5	0.243
2-Isopropoxyethanol	3	109-59-1	2,000
Isopropylamine	3	75-31-0	569
Isopropyl glycidyl ether	3	4016-14-2	2,000
N-Isopropylaniline	3	768-52-5	520
Kaolin	3	1332-58-7	94.1
Kepon (Chlordecone)	3	143-50-0	0.0386
Ketene	3	463-51-4	40.5
Lead Acetate, as Pb	3	301-04-2	2.22
Lead compounds	2	7439-92-1 *	2,000
Lead Phosphate, as Pb	3	7446-27-7	14.8
Lindane and other hexachlorocyclohexane isomers	2, 3	58-89-9 *	0.573
Maleic anhydride	2, 3	108-31-6	18.9
Manganese, elemental and inorganic compounds, as Mn	2, 3	7439-96-5 *	9.41
Melphalan	3	148-82-3	0.0048
Mercury, as Hg, alkyl compounds	2, 3	7439-97-6 *	0.471
Mercury, as Hg, aryl compounds	2, 3	7439-97-6 *	4.71
Mercury, as Hg, inorganic forms including metallic mercury	2, 3	7439-97-6 *	1.18
Mesityl oxide	3	141-79-7	2,000
Mestranol	3	72-33-3	0.243
Methacrylic acid	3	79-41-4	2,000
Methanol	2	67-56-1	2,000
Methomyl	3, 6	16752-77-5	118
Methoxychlor	2	72-43-5	2,000
2-Methoxyethanol (Methyl Cellosolve; EGME)	3	109-86-4	732
2-Methoxyethyl acetate (Methyl Cellosolve acetate; EGMEA)	3	110-49-6	1,137
4-Methoxyphenol	3	150-76-5	235
Methyl chloroform (1,1,1-Trichloroethane; TCA)	2	71-55-6	2,000
Methyl ethyl ketone (2-Butanone; MEK)	2	78-93-3	2,000
Methyl acrylate	3	96-33-3	331
Methylacrylonitrile	3	126-98-7	129
Methylamine	3	74-89-5	299
Methyl n-amy ketone	3	110-43-0	2,000
N-Methyl aniline	3	100-61-8	103
Methyl bromide (Bromomethane)	2, 3, 6	74-83-9	88.8
Methyl n-butyl ketone	3	591-78-6	964
Methyl chloride (Chloromethane)	2, 3	74-87-3	2,000
5-Methyl chrysene	3	3697-24-3	0.162
Methyl 2-cyanoacrylate	3	137-05-3	42.8
Methylcyclohexanol	3	25639-42-3	2,000
o-Methylcyclohexanone	3	583-60-8	2,000
Methyl demeton	3, 6	8022-00-2	23.5
Methylene bisphenyl isocyanate (Methylene diphenyl isocyanate; MDI)	2, 3	101-68-8	2.41
Methylene chloride (Dichloromethane)	2, 3	75-09-2	378
4,4'-Methylene bis(2-chloroaniline) (MOCA)	2, 3	101-14-4	0.413
Methylene bis(4-cyclohexylisocyanate)	3	5124-30-1	2.52
4,4'-Methylenedianiline (and dihydrochloride)	2, 3	101-77-9 *	0.386
Methyl ethyl ketone peroxide	3	1338-23-4	94.3
Methyl formate	3	107-31-3	2,000
Methyl hydrazine	2, 3	60-34-4	0.887
Methyl iodide (Iodomethane)	2, 3	74-88-4	546
Methyl isoamyl ketone	3	110-12-3	2,000
Methyl isobutyl carbinol	3	108-11-2	2,000
Methyl isobutyl ketone (MIBK; Hexone)	2, 3	108-10-1	2,000
Methyl isocyanate	2, 3	624-83-9	2.2
Methyl methacrylate	2, 3	80-62-6	2,000

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number <sup>7</sup>	Inclusion Level (lbs/yr)
N-Methyl-N'-nitro-N-nitrosoguanidine (MNNG)	3	70-25-7	0.074
Methyl parathion	3, 6	298-00-0	9.41
alpha-Methyl styrene	3	98-83-9	2,000
Methyl tert-butyl ether (MTBE)	2, 3	1634-04-4	2,000
Metribuzin	3	21087-64-9	235
Mevinphos (Phosdrin)	3, 6	7786-34-7	4.23
Mirex	3	2385-85-5	0.0348
Molybdenum, as Mo, metal and insoluble compounds	3	7439-98-7 *	471
Molybdenum, as Mo, soluble compounds	3	7439-98-7 *	235
Monocrotophos	3, 6	6923-22-4	11.8
Morpholine	3	110-91-8	2,000
Mustard gas	3	505-60-2	0.243
Myleran (1,4-Butanediol dimethanesulphonate; Busulphan)	3	55-98-1	0.243
Naled	3, 6	300-76-5	141
Naphthalene	2, 3	91-20-3	2,000
2-Naphthylamine	3	91-59-8	0.243
Nickel and compounds, as Ni	2, 3	7440-02-0 *	0.683
Nickel carbonyl, as Ni	3	13463-39-3	0.683
Nickel subsulfide, as Ni	2, 3	12035-72-2	0.37
Nitric acid	3	7697-37-2	243
Nitrilotriacetic acid	3	139-13-9	118
p-Nitroaniline	3	100-01-6	141
Nitrobenzene	2, 3	98-95-3	237
4-Nitrobiphenyl	2	92-93-3	2,000
p-Nitrochlorobenzene	3	100-00-5	30.3
Nitroethane	3	79-24-3	2,000
Nitrogen mustards (2,2'-Dichloro-N-methyldiethylamine)	3	51-75-2	0.243
Nitrogen oxides	1, 4	*	2,000
Nitromethane	3	75-52-5	2,000
4-Nitrophenol	2	100-02-7	2,000
1-Nitropropane	3	108-03-2	2,000
2-Nitropropane	2, 3	79-46-9	0.243
1-Nitropyrene	3	5522-43-0	1.62
N-Nitrosodi-n-butylamine	3	924-16-3	0.111
N-Nitrosodiethanolamine	3	1116-54-7	0.222
N-Nitrosodiethylamine	3	55-18-5	0.00413
N-Nitrosodimethylamine	2, 3	62-75-9	0.0127
N-Nitrosodi-n-propylamine	3	621-64-7	0.0888
N-Nitroso-N-ethylurea	3	759-73-9	0.0231
N-Nitroso-N-methylurea	2, 3	684-93-5	0.00523
N-Nitrosomethylvinylamine	3	4549-40-0	0.243
N-Nitrosomorpholine	2, 3	59-89-2	0.0935
N'-Nitrososornicotine	3	16543-55-8	0.243
N-Nitrosopiperidine	3	100-75-4	0.0658
N-Nitrosopyrrolidine	3	930-55-2	0.291
N-Nitrososarcosine	3	13256-22-9	0.243
Nitrotoluene (mixtures and isomers)	3	88-72-2 *	528
Nitrous oxide	3	10024-97-2	2,000
Octachloronaphthalene	3	2234-13-1	4.71
Oestradiol (Estradiol)	3	50-28-2	0.0162
Oxalic acid	3	144-62-7	47.1
P,p'-Oxybis(benzenesulfonyl hydrazide)	3	80-51-3	4.71
Paraquat (respirable sizes) (Paraquat chloride)	3, 6	1910-42-5 *	4.71
Parathion	2, 3, 6	56-38-2	4.71
Particulate matter	4	*	2,000
Pentachloronaphthalene	3	1321-64-8	23.5
Pentachloronitrobenzene (Quintobenzene; PCNB)	2, 3	82-68-8	23.5
Pentachlorophenol (PCP)	2, 3	87-86-5	23.5
Pentyl Acetate (mixtures and isomers)	3	628-63-7 *	2,000
Perchloroethylene (Tetrachloroethylene)	2, 3	127-18-4	30.1
Perchloromethyl mercaptan	3	594-42-3	35.8
Perfluoroisobutylene	3	382-21-8	5.35
Persulfates (Ammonium, Potassium, Sodium)	3	7727-54-0 *	4.71
Phenazopyridine and phenazopyridine hydrochloride	3	136-40-3 *	3.63
Phenol	2, 3	108-95-2	906
Phenolphthalein	3	77-09-8	0.243
Phenothiazine	3, 6	92-84-2	235

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number <sup>7</sup>	Inclusion Level (lbs/yr)
Phenylenediamine (mixtures and isomers)	2, 3	106-50-3 *	4.71
Phenyl ether vapor	3	101-84-8	328
Phenyl glycidyl ether (PGE)	3	122-60-1	28.9
Phenylhydrazine	3	100-63-0	20.8
Phenyl mercaptan	3	108-98-5	106
Phenytoin and sodium salt of phenytoin	3	57-41-0 *	0.243
Phorate	3, 6	298-02-2	2.35
Phosgene	2, 3	75-44-5	19
Phosphine	2, 3	7803-51-2	19.6
Phosphoric acid	3	7664-38-2	47.1
Phosphorus (yellow)	2, 3	7723-14-0	4.77
Phosphorus oxychloride	3	10025-87-3	29.5
Phosphorus pentachloride	3	10026-13-8	40.1
Phosphorus pentasulfide	3	1314-80-3	47.1
Phosphorus trichloride	3	7719-12-2	52.9
Phthalic anhydride	2, 3	85-44-9	285
Picric acid	3	88-89-1	4.71
Pindone	3, 6	83-26-1	4.71
Platinum (metal)	3	7440-06-4	47.1
Platinum, soluble salts, as Pt	3	7440-06-4 *	0.0941
PM10	1, 4	*	2,000
Polybrominated biphenyls (PBBs; Bromodiphenyls)	3	59536-65-1 *	0.0207
Polychlorinated biphenyls (PCBs; Chlorodiphenyls; Arochlor)	2, 3	1336-36-3 *	0.01
Potassium hydroxide	3	1310-58-3	131
Procarbazine and procarbazine hydrochloride	3	366-70-1 *	0.0444
1,3-Propane sultone	2, 3	1120-71-4	0.258
Propargyl alcohol	3	107-19-7	108
beta-Propiolactone	2, 3	57-57-8	0.0444
Propionaldehyde	2	123-38-6	2,000
Propionic acid	3	79-09-4	1,426
Propoxur (Baygon)	2, 3, 6	114-26-1	23.5
Propylene dichloride (1,2-Dichloropropane)	2, 3	78-87-5	71.1
Propylene glycol monomethyl ether (PGME)	3	107-98-2	2,000
Propylenimine (2-Methyl aziridine; propylene imine)	2, 3	75-55-8	0.243
Propylene oxide	2, 3	75-56-9	48
Propylthiouracil	3	51-52-5	0.613
Pyrethrum	3, 6	8003-34-7	235
Pyridine	3	110-86-1	675
Quinoline	2	91-22-5	2,000
Quinone	2, 3, 6	106-51-4	20.8
Resorcinol	3	108-46-3	2,000
Rhodium (metal) and insoluble compounds, as Rh	3	7440-16-6 *	47.1
Rhodium, soluble compounds, as Rh	3	7440-16-6 *	0.471
Rotenone (commercial)	3, 6	83-79-4	235
Safrole	3	94-59-7	2.82
Selenium and compounds, as Se	2, 3	7782-49-2 *	9.41
Silicon tetrahydride (Silane)	3	7803-62-5	309
Sodium Azide, as sodium azide or hydrazoic acid vapor	3	26628-22-8 *	19.1
Sodium bisulfite	3	7631-90-5	235
Sodium fluoroacetate	3, 6	62-74-8	2.35
Sodium hydroxide	3	1310-73-2	131
Sodium metabisulfite	3	7681-57-4	235
Stibine (Antimony hydride)	3, 6	7803-52-3	24
Stoddard solvent (Mineral spirits)	3	8052-41-3	2,000
Streptozotocin	3	18883-66-4	0.00573
Strong inorganic acid mists containing sulfuric acid (>35% by weight)	3	7664-93-9	0.243
Strychnine	3, 6	57-24-9	7.06
Styrene oxide	2	96-09-3	2,000
Styrene, monomer	2, 3	100-42-5	2,000
Sulfometuron methyl	3	74222-97-2	235
Sulfotep (TEDP)	3, 6	3689-24-5	9.41
Sulfur dioxide	1, 4	7446-09-5	2,000
Sulfur monochloride	3	10025-67-9	361
Sulfur tetrafluoride	3	7783-60-0	28.9
Sulfuric acid	3	7664-93-9	47.1
Sulfuryl fluoride	3, 6	2699-79-8	982
Sulprofos	3	35400-43-2	47.1

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number <sup>7</sup>	Inclusion Level (lbs/yr)
Talc, containing no asbestos fibers	3	14807-96-6	94.1
Tantalum, metal and oxide dusts, as Ta	3	7440-25-7 *	235
Tellurium and compounds, except hydrogen telluride, as Te	3	13494-80-9 *	4.71
TEPP	3, 6	107-49-3	2.35
Terphenyls	3	26140-60-3 *	327
2,3,7,8-Tetrachlorodibenzo-p-dioxin (Dioxin; 2,3,7,8-TCDD), as dioxin equivalents	2,3,4	1746-01-6	0.00001
1,1,2,2-Tetrachloroethane	2, 3	79-34-5	323
Tetrachloronaphthalene	3	1335-88-2	94.1
1,1,1,2-Tetrafluoroethane	3	811-97-2	2,000
Tetrafluoroethylene	3	116-14-3	0.243
Tetrahydrofuran	3	109-99-9	2,000
Terantramethane	3	509-14-8	0.243
Thallium, elemental and soluble compounds, as Tl	3	7440-28-0 *	4.71
Thionyl chloride	3	7719-09-7	318
Thiourea	3	62-56-6	8.46
Thiram	3, 6	137-26-8	47.1
Tin organic compounds, as Sn	3	7440-31-5 *	4.71
Tin, metal, oxides and inorganic compounds, except tin hydride, as Sn	3	7440-31-5 *	94.1
Titanium tetrachloride	2	7550-45-0	2,000
Toluene (Toluol)	2, 3	108-88-3	2,000
2,4-/2,6-Toluene diisocyanate (mixtures and isomers) (TDI)	2, 3	584-84-9 *	1.24
m- and p-Toluidine	3	108-44-1	412
o-Toluidine and o-toluidine hydrochloride and mixed isomers	2, 3	95-53-4 *	3.48
Total reduced sulfur and reduced sulfur compounds	4	*	2,000
Tributyl phosphate	3	126-73-8	103
1,2,4-Trichlorobenzene	2, 3	120-82-1	2,000
1,1,2-Trichloroethane	2, 3	79-00-5	2,000
Trichloroethylene (Trichloroethene)	2, 3	79-01-6	88.8
Trichloronaphthalene	3	1321-65-9	235
2,4,5-Trichlorophenol	2	95-95-4	2,000
2,4,6-Trichlorophenol	2, 3	88-06-2	57.3
1,2,3-Trichloropropane	3	96-18-4	0.243
Triethanolamine	3	102-71-6	235
Triethylamine	2	121-44-8	195
Trifluralin	2	1582-09-8	2,000
1,3,5-Triglycidyl-s-triazinetriene	3	2451-62-9	2.35
Trimellitic anhydride	3	552-30-7	2.62
Trimethyl benzene (mixtures and isomers)	3	25551-13-7 *	2,000
Trimethylamine	3	75-50-3	569
2,2,4-Trimethylpentane	2	540-84-1	2,000
2,4,6-Trinitrotoluene (TNT)	3	118-96-7	4.71
Triorthocresyl phosphate	3	78-30-8	4.71
Triphenyl phosphate	3	115-86-6	141
Tris(1-aziridinyl)phosphine sulfide (Thiotepa)	3	52-24-4	0.0523
Tris(2,3-dibromopropyl phosphate)	3	126-72-7	0.269
Tungsten, as W, metal and insoluble compounds	3	7440-33-7 *	235
Tungsten, as W, soluble compounds	3	7440-33-7 *	47.1
Uranium (natural), soluble and insoluble compounds, as U	3	7440-61-1 *	9.41
Urethane (Ethyl carbamate)	2, 3	51-79-6	0.613
n-Valeraldehyde	3	110-62-3	2,000
Vanadium pentoxide, as V2O5, respirable dust and fume	3	1314-62-1	2.35
Vinyl acetate	2, 3	108-05-4	1,657
Vinyl bromide	2	593-60-2	103
Vinyl chloride	2, 3	75-01-4	20.2
Vinyl cyclohexene dioxide (4-vinyl-1-cyclohexene diepoxide)	3	106-87-6	0.243
4-Vinyl cyclohexene	3	100-40-3	20.8
Vinyl fluoride	3	75-02-5	88.6
Vinylidene chloride (1,1-Dichloroethylene)	2, 3	75-35-4	933
Vinyl toluene	3	25013-15-4	2,000
Volatile organic compounds (Reactive organic gases)	1	*	2,000
Warfarin	3, 6	81-81-2	4.71
Xylene (mixtures and isomers) (Xylof; Dimethyl Benzene)	2, 3	1330-20-7 *	2,000
m-Xylene-alpha,alpha'-diamine	3	1477-55-0	6.54
Xylidine (mixtures and isomers)	3	1300-73-8 *	117
Yttrium metal and compounds, as Y	3	7440-65-5 *	47.1
Zeolites (Erionite)	3	66733-21-9	0.243

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number <sup>7</sup>	Inclusion Level (lbs/yr)
Zirconium and compounds, as Zr	3	7440-67-7 *	235

<sup>1</sup> Criteria pollutant or criteria pollutant precursor.

<sup>2</sup> Federal hazardous air pollutant listed under section 112(b) of the act.

<sup>3</sup> State hazardous air pollutant.

<sup>4</sup> Federal New Source Performance Standard.

<sup>5</sup> Stratospheric ozone depleting substance.

<sup>6</sup> Pesticides, rodenticides, insecticides, herbicides and fungicides.

<sup>7</sup> The Chemical Abstract Service or CAS numbers refer to the unique chemical abstracts service registry number assigned to a specific chemical, isomer or mixture of chemicals or isomers and recorded in the CAS chemical registry system by the Chemical Abstracts Service, PO Box 3012, Columbus OH 42310, phone 1-614-447-3600.

<sup>8</sup> Glycol ethers include mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol, R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OR'

where:

n = 1, 2 or 3

R = alkyl C7 or less or

R = phenyl or alkyl substituted phenyl

R' = H or alkyl C7 or less or OR' consists of carboxylic acid ester, sulfate, phosphate, nitrate or sulfonate.

\*Indicates contaminants for which multiple CAS numbers may apply. For contaminants listed as a metal and its compounds, the given CAS number refers to the metal.

SECTION 17. NR 407.09(1)(c)1.b. is amended to read:

NR 407.09(1)(c)1.b. Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring, periodic monitoring or testing sufficient to yield reliable data from the relevant time period that are representative of the stationary source's compliance with the permit. Monitoring or testing requirements shall assure use of terms, test methods, units, averaging periods and other statistical conventions consistent with the applicable requirement. Monitoring may consist of recordkeeping sufficient to meet the requirements of this subd. 1. b. Permits for non-part 70 sources shall contain the requirements in this subd. 1. b. only for those air contaminants emitted from an emissions unit, operation or activity where the actual emissions exceed the levels in Table 2, or Table 3 for calendar years 2004 and later, in s. NR 407.05. Actual emissions used for this determination shall be those reported under ch. NR 438 for the most recent year prior to when the permit or renewal is issued.

SECTION 18. NR 407.14(1) (intro.) is amended to read:

NR 407.14(1)(intro.) MANDATORY REVISIONS. The Except for a change in an applicable requirement that is due to an addition of, or revision to, a hazardous air contaminant standard or control requirement in subch. III of ch. NR 445, the department shall revise an operation permit for any of the following reasons:

SECTION 19. NR 407.14(1m)(e) is created to read:



NR 407.14(1m)(e) A change in the applicable requirement is due to an addition of, or revision to, a hazardous air contaminant standard or control requirement in subch. III of ch. NR 445.

SECTION 20. NR 410.03(2)(g) is amended to read:

NR 410.03(2)(g) \$650, if the source is subject to an emission limitation under chs. NR 446 to 483 ~~469~~, or if the permit establishes an emission limit for a hazardous air contaminant listed in Table 1, 2, 4 A, B or 5 of ch. NR 445 C of s. NR 445.07.

SECTION 21. NR 410.04(2)(b)5. and 6. are created to read:

NR 410.04(2)(b)5. Emissions of acetone, sec-butanol, tert-butanol, n-butyl acetate, chlorobromomethane, diethyl ketone, ethyl acetate, isobutyl acetate, methyl acetate, methyl acetylene, octane (all isomers), pentane (all isomers) and vinylidene fluoride.

6. Emissions of di-n-octyl phthalate, octachlorostyrene, pentachlorobenzene, perylene, 1,2,3,4-tetrachlorobenzene, 1,2,4,5-tetrachlorobenzene and tributyl tin.

SECTION 22. NR 419.07(4)(b)3., (6)(a)1.b. and (7)(b) are amended to read:

NR 419.07(4)(b)3. The maximum emission limit for any hazardous air contaminant listed in tables 1 to 5 of s. NR 445.04 under ch. NR 445 Tables A to C of s. NR 445.07.

(6)(a)1.b. When a substance listed in Table 3 with a control requirement in Table A, B or C of s. NR 445.04 s. NR 445.07 is present in the contaminated soil, testing for the Table 3 substances the listed substance shall be done once during the first 3 days of operation, once during the third week of operation, and once every 6 months thereafter. For soil contaminated with more than one Table 3 air contaminant with a control requirement in Table A, B or C of s. NR 445.07, the department's bureau of air management may approve the testing of certain Table 3 substances that act as indicators for other Table 3 substances with control requirements in Table A, B or C of s. NR 445.07 present in the soil.

(7)(b) Maintain records for 3 years quantifying the year-to-date weight of s. NR 445.04 Table 3 substances with control requirements in Table A, B or C of s. NR 445.07 contained in soil or water remediated for which testing was required under sub. (6).

SECTION 23. NR 422.083(1)(a), Note, (b), and Note and (4)(a) are amended to read:

NR 422.083(1)(a) Except as provided in sub. (4), this section applies to plastic parts coating at facilities ~~which~~ that are located in Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha county and have maximum theoretical emissions of VOCs from the facility, excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, ~~423.04~~, 423.05, 424.04 or 424.05, of 25 tons per year or more.

Note: To determine the maximum theoretical emissions of VOCs from a facility, excluding any maximum theoretical emissions of VOCs specifically subject to the cited provisions, use the following procedure. 1. Calculate the maximum theoretical emissions of VOCs from the facility. 2. Calculate the maximum theoretical emissions of VOCs from the facility subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, ~~423.04~~, 423.05, 424.04 or 424.05. 3. Subtract the emissions calculated in step 2 from the emissions calculated in step 1. 4. If the quantity calculated in step 3 is less than 25 tons per year, then the only requirements of this section ~~which~~ that apply to the facility are the recordkeeping requirements of sub. (4).

(b) Except as provided in sub. (4), this section applies to plastic parts coating at facilities ~~which~~ that are located in Kewaunee, Manitowoc or Sheboygan county and have maximum theoretical emissions of VOCs from the facility, excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, ~~423.04~~, 423.05, 424.04 or 424.05, of 100 tons per year or more.

Note: To determine the maximum theoretical emissions of VOCs from a facility, excluding any maximum theoretical emissions of VOCs specifically subject to the cited provisions, use the following procedure. 1. Calculate the maximum theoretical emissions of VOCs from the facility. 2. Calculate the maximum theoretical emissions of VOCs from the facility subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, ~~423.04~~, 423.05, 424.04 or 424.05. 3. Subtract the emissions calculated in step 2 from the emissions calculated in step 1. 4. If the quantity calculated in step 3 is less than 100 tons per year, then the only requirements of this section ~~which~~ that apply to the facility are the recordkeeping requirements of sub. (4).

(4)(a) To determine applicability under sub. (1)(a) or (b), each owner or operator of a plastic parts coating operation at a facility located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha county shall maintain records of the maximum theoretical emissions of VOCs from the facility excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, ~~423.04~~, 423.05, 424.04 or 424.05.

SECTION 24. NR 423.035(1)(a), Note, (b) and Note are amended to read:

NR 423.035(1)(a) Except as provided in sub. (9)(a), this section applies to industrial cleaning operations at facilities ~~which~~ that are located in Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha county and have maximum theoretical emissions of VOCs from the facility, excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, ~~423.04~~, 423.05, 424.04 or 424.05, of 25 tons per year or more.

Note: To determine the maximum theoretical emissions of VOCs from a facility, excluding any maximum theoretical emissions of VOCs specifically subject to the cited provisions, use the following procedure. 1. Calculate the maximum theoretical emissions of VOCs from the facility. 2. Calculate the maximum theoretical emissions of VOCs from the facility subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, ~~423.04~~, 423.05, 424.04 or 424.05. 3. Subtract the emissions calculated in step 2 from the emissions calculated in step 1. 4. If the quantity calculated in step 3 is less than 25 tons per year, then the only requirements of this section ~~which~~ that apply to the facility are the recordkeeping requirements of sub. (9)(a).

(b) Except as provided in sub. (9)(a), this section applies to industrial cleaning operations at facilities ~~which~~ that are located in Kewaunee, Manitowoc or Sheboygan county and have maximum theoretical emissions of VOCs from the facility, excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, ~~423.04~~, 423.05, 424.04 or 424.05, of 100 tons per year or more.

Note: To determine the maximum theoretical emissions of VOCs from a facility, excluding any maximum theoretical emissions of VOCs specifically subject to the cited provisions, use the following procedure. 1. Calculate the maximum theoretical emissions of VOCs from the facility. 2. Calculate the maximum theoretical emissions of VOCs from the facility subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, ~~423.04~~, 423.05, 424.04 or 424.05. 3. Subtract the emissions calculated in step 2 from the emissions calculated in step 1. 4. If the quantity calculated in step 3 is less than 100 tons per year, then the only requirements of this section ~~which~~ that apply to the facility are the recordkeeping requirements of sub. (9)(a).

SECTION 25. NR 423.04 is repealed.

SECTION 26. NR 438.03(1)(a) is amended to read:

NR 438.03(1)(a) ~~Any~~ Except as provided in par. (am), any person owning or operating a facility ~~which~~ that emits an air contaminant in quantities above the applicable reporting levels ~~listed in Table 1~~, except indirect sources of air pollution, shall annually submit to the department an emission inventory report of annual, actual emissions or,

for particulate matter, PM<sub>10</sub>, sulfur dioxide, nitrogen oxides, carbon monoxide and volatile organic compounds, throughput information sufficient for the department to calculate its annual, actual emissions. The reportable air contaminants and applicable reporting levels are listed in the following tables:

1. Table 1 for air contaminants emitted in calendar years 2003 and earlier.

2. Table 2 for air contaminants emitted in calendar years 2004 and later.

SECTION 27. NR 438.03(1)(am) is created to read:

NR 438.03(1)(am)1. Beginning with emissions reported for calendar year 2004, the owner or operator of a facility described by a standard industrial classification code listed in Table D of s. NR 445.11, or that has annual actual emissions of less than 5 tons of particulate matter and less than 3 tons of volatile organic compounds, may limit the information on hazardous air contaminants included in the annual emission inventory report to those contaminants identified under s. NR 445.11(1)(a) or (b).

2. Notwithstanding subd. 1., the owner or operator shall continue to report annual emissions of any air contaminant reported in prior calendar years for the facility, provided annual, actual emissions are greater than the reporting level in Table 2.

SECTION 28. NR 438.03(1)(b) is amended to read:

NR 438.03(1)(b) When preparing its an emission inventory report, the owner or operator of a facility may rely on information in an approved material safety data sheet. Trace contaminants need not be reported if they constitute less than 1% (10,000 parts per million) of the material, or 0.1% (1,000 parts per million) of the material if the air contaminant is listed with a control requirement in Table 3- column (i) of Table A, B or C of s. NR 445.04 s. NR 445.07, unless a hazardous air contaminant is formed in processing the material.

SECTION 29. Table 1 (title) and the table's footnote 5 of NR 438.03(1) are amended to read:

**Table 1**  
**Reporting Levels for Calendar Years 2003 and Earlier**

<sup>5</sup> Glycol ethers means any compound which can be described by the following chemical formula:  $R(OCH_2CH_2)_n-OR'$   
where:

$n = 1, 2, \text{ or } 3$

R = alkyl C7 or less or R = phenyl or alkyl substituted phenyl

R' = H or alkyl C7 or less or

OR' = ester, sulfate, phosphate, nitrate or sulfonate (i.e. any group that will readily come off) include mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol, R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OR'

where:

n = 1, 2 or 3

R = alkyl C7 or less or

R = phenyl or alkyl substituted phenyl

R' = H or alkyl C7 or less or OR' consists of carboxylic acid ester, sulfate, phosphate, nitrate or sulfonate.

SECTION 30. Table 2 of NR 438.03(1) is created to read:

**Table 2**  
**Reporting Levels for Calendar Years 2004 and Later**

Air Contaminant Name	CAS Number <sup>1</sup>	Reporting Level (lbs/yr)
Acetaldehyde	75-07-0	404
Acetamide	60-35-5	6,000
Acetic acid	64-19-7	5,774
Acetic anhydride	108-24-7	4,912
Acetone	67-64-1	100,000
Acetonitrile	75-05-8	6,000
Acetophenone	98-86-2	6,000
2-Acetylaminofluorene	53-96-3	6,000
Acrolein	107-02-8	75
Acrylamide	79-06-1	0.683
Acrylic acid	79-10-7	88.8
Acrylonitrile	107-13-1	13.1
Adipic Acid	124-04-9	1,176
Adiponitrile	111-69-3	2,080
Adriamycin	23214-92-8	1.22
Aflatoxins	1402-68-2	1.22
Aldrin	309-00-2	58.8
Allyl alcohol	107-18-6	279
Allyl chloride	107-05-1	736
Allyl glycidyl ether	106-92-3	1,098
Aluminum alkyls and soluble salts, as Al	7429-90-5 <sup>2</sup>	471
Aluminum pyro powders, as Al	7429-90-5 <sup>2</sup>	1,176
o-Aminoazotoluene (2-Aminoazotoluene)	97-56-3	0.808
4-Aminobiphenyl	92-67-1	0.148
Amitrole	61-82-5	3.29
<sup>3</sup> Ammonia	7664-41-7	4,097
Ammonium perfluorooctanoate	3825-26-1	2.35
Aniline	62-53-3	1,792
o-Anisidine and o-anisidine hydrochloride (mixtures and isomers)	29191-52-4 <sup>2</sup>	22.2
Antimony and compounds, as Sb	7440-36-0 <sup>2</sup>	118
Antimony trioxide	1309-64-4	17.8
ANTU	86-88-4	70.6
Arsenic, elemental and inorganic compounds, as As	7440-38-2 <sup>2</sup>	0.207
<sup>3</sup> Arsenic	7784-42-1	4.44
Asbestos, all forms	1332-21-4 <sup>2</sup>	1.22
Atrazine	1912-24-9	1,176
Azathioprine	446-86-6	1.74
Azinphos-methyl	86-50-0	47.1
Barium, soluble compounds, as Ba	7440-39-3 <sup>2</sup>	118
Benomyl	17804-35-2	2,353
Benz(a)anthracene	56-55-3	8.08
Benzene	71-43-2	114
Benzidine	92-87-5	0.0133

Air Contaminant Name	CAS Number <sup>1</sup>	Reporting Level (lbs/yr)
Benzo(a)phenanthrene (Chrysene)	218-01-9	12
Benzo(j,k)fluorene	206-44-0	12
Benzo(b)fluoranthene	205-99-2	1.22
Benzo(j)fluoranthene	205-82-3	1.22
Benzo(k)fluoranthene	207-08-9	1.22
Benzo(a)pyrene	50-32-8	0.808
Benzotrichloride	98-07-7	1.22
Benzoyl chloride	98-88-4	940
Benzoyl peroxide	94-36-0	1,176
Benzyl acetate	140-11-4	6,000
Benzyl chloride	100-44-7	1,218
Beryllium and beryllium compounds, as Be	7440-41-7 <sup>2</sup>	0.37
Biphenyl	92-52-4	297
Bischloroethyl nitrosoarea	154-93-8	1.22
N,N-Bis (2-chloroethyl)-2-naphthylamine (Chlornaphazine)	494-03-1	1.22
Bis(chloromethyl) ether (BCME) and technical grade	542-88-1	1.22
Bis(2-dimethylaminoethyl) ether (DMAEE)	3033-62-3	77.1
Bismuth telluride, as Bi2Te3: Se-Doped	1304-82-1	1,176
Borates, tetra, sodium salts, decahydrate	1303-96-4 <sup>2</sup>	1,176
Borates, tetra, sodium salts, pentahydrate	1303-96-4 <sup>2</sup>	235
Boron tribromide	10294-33-4	3,352
3 Boron trifluoride	7637-07-2	907
Bromacil	314-40-9	2,353
3 Bromine	7726-95-6	154
3 Bromine pentafluoride	7789-30-2	168
Bromodichloromethane	75-27-4	24
Bromoform	75-25-2	1,216
1,3-Butadiene	106-99-0	3.17
sec-Butanol	78-92-2	100,000
tert-Butanol	75-65-0	100,000
4 2-Butoxyethanol (Ethylene glycol monobutyl ether; EGBE; butyl cellosolve)	111-76-2	6,000
n-Butyl alcohol (n-Butanol)	71-36-3	6,000
n-Butyl acetate	123-86-4	100,000
n-Butyl acrylate	141-32-2	2,467
n-Butylamine	109-73-9	4,892
Butylated hydroxyanisole (BHA)	25013-16-5	6,000
tert-Butyl chromate, as Cr	1189-85-1	0.074
n-Butyl glycidyl ether (BGE)	2426-08-6	6,000
n-Butyl lactate	138-22-7	6,000
o-sec-Butylphenol	89-72-5	6,000
p-tert-Butyltoluene	98-51-1	1,426
C.I. Basic Red 9 monohydrochloride	569-61-9	12.5
Cadmium and cadmium compounds, as Cd	7440-43-9 <sup>2</sup>	0.494
Calcium cyanamide	156-62-7	118
Calcium hydroxide	1305-62-0	1,176
Calcium oxide	1305-78-8	471
Camphor (synthetic)	76-22-2	2,930
Caprolactam (aerosol and vapor)	105-60-2	5,444
Captafol	2425-06-1	23.5
Captan	133-06-2	1,176
Carbaryl	63-25-2	1,176
Carbofuran	1563-66-2	23.5
Carbon dioxide	124-38-9	100,000 tons
Carbon monoxide	630-08-0	10,000
Carbon black	1333-86-4	823
Carbon disulfide	75-15-0	6,000
Carbon tetrabromide	558-13-4	319
Carbon tetrachloride	56-23-5	59.2
Carbonyl fluoride	353-50-4	1,270
Carbonyl sulfide	463-58-1	6,000
Catechol (Pyrocatechol)	120-80-9	5,298
Refractory Ceramic Fibers (respirable size)	<sup>2</sup>	1.22
Cesium hydroxide	21351-79-1	471
Chloramben	133-90-4	6,000
Chlorambucil	305-03-3	0.00683
Chlordane	57-74-9	118

Air Contaminant Name	CAS Number <sup>1</sup>	Reporting Level (lbs/yr)
Chlorendic acid	115-28-6	34.2
Chlorinated camphene (Toxaphene)	8001-35-2	2.78
Chlorinated diphenyl oxide	55720-99-5	118
Chlorinated paraffins (C12; 60% chlorine)	108171-26-2	35.5
3 Chlorine	7782-50-5	341
3 Chlorine dioxide	10049-04-4	64.9
3 Chlorine trifluoride	7790-91-2	124
Chloroacetic acid	79-11-8	6,000
2-Chloroacetophenone	532-27-4	74.4
Chlorobenzene (Monochlorobenzene)	108-90-7	6,000
Chlorobenzilate	510-15-6	6,000
o-Chlorobenzylidene malononitrile	2698-41-1	126
Chlorobromomethane	74-97-5	100,000
3 1-Chloro-1,1-difluoroethane (Hydrochlorofluorocarbon-142b; HCFC-142b; R-142b)	75-68-3	6,000
3 Chlorodifluoromethane (Hydrochlorofluorocarbon-22; HCFC-22; R-22)	75-45-6	6,000
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)	13010-47-4	1.22
3 Chlorofluorocarbon-11 (CFC-11; R-11; Trichlorofluoromethane)	75-69-4	6,000
3 Chlorofluorocarbon-111 (CFC-111)	954-56-3	6,000
3 Chlorofluorocarbon-112 (CFC-112)	76-12-0	6,000
3 Chlorofluorocarbon-113 (CFC-113; R-113; Trichlorotrifluoroethane)	76-13-1	6,000
3 Chlorofluorocarbon-114 (CFC-114; R-114; Dichlorotetrafluoroethane)	76-14-2	6,000
3 Chlorofluorocarbon-115 (CFC-115; R-115; Monochloropentafluoroethane)	76-15-3	6,000
3 Chlorofluorocarbon-12 (CFC-12; R-12; Dichlorodifluoromethane)	75-71-8	6,000
3 Chlorofluorocarbon-13 (CFC-13; R-13; Chlorotrifluoromethane)	75-72-9	6,000
3 Chlorofluorocarbon-211 (CFC-211; R-211)	422-78-6	6,000
3 Chlorofluorocarbon-212 (CFC-212; R-212)	3182-26-1	6,000
3 Chlorofluorocarbon-213 (CFC-213; R-213)	165-97-7	6,000
3 Chlorofluorocarbon-214 (CFC-214; R-214)	29255-31-0	6,000
3 Chlorofluorocarbon-215 (CFC-215; R-215)	4259-43-2	6,000
3 Chlorofluorocarbon-216 (CFC-216; R-216)	661-97-2	6,000
3 Chlorofluorocarbon-217 (CFC-217; R-217)	422-86-6	6,000
Chloroform	67-66-3	38.6
Chloromethyl methyl ether (CMME)	107-30-2	1.22
1-Chloro-1-nitropropane	600-25-9	2,378
Chloropicrin (Trichloronitromethane)	76-06-2	158
beta-Chloroprene	126-99-8	1.22
o-Chlorostyrene	2039-87-4	6,000
o-Chlorotoluene	95-49-8	6,000
Chlorpyrifos	2921-88-2	47.1
Chromium (metal) and compounds other than Chromium (VI)	7440-47-3 <sup>2</sup>	118
Chromium (VI): Chromic acid mists and dissolved Cr (VI) aerosols, as Cr	7440-47-3 <sup>2</sup>	0.074
Chromium (VI): compounds and particulates	7440-47-3 <sup>2</sup>	0.074
Chromyl chloride, as Cr	14977-61-8	0.074
3 Cobalt, elemental, and inorganic compounds, as Co	7440-48-4 <sup>2</sup>	4.71
3 Coke oven emissions		1.43
Copper and compounds, fume, as Cu	7440-50-8 <sup>2</sup>	47.1
Copper and compounds, dusts and mists, as Cu	7440-50-8 <sup>2</sup>	235
p-Cresidine	120-71-8	20.7
Cresol (mixtures and isomers)	1319-77-3 <sup>2</sup>	5,203
Crotonaldehyde	4170-30-3 <sup>2</sup>	281
Cruformate	299-86-5	1,176
Cumene (Isopropyl benzene)	98-82-8	6,000
Cyanamide	420-04-2	471
Cyanides, (inorganics), as CN	143-33-9 <sup>2</sup>	1,635
Cyanogen	460-19-5	5,008
Cyanogen chloride	506-77-4	247
Cyclohexanol	108-93-0	6,000
Cyclohexanone	108-94-1	6,000
Cyclohexylamine	108-91-8	6,000
Cyclonite	121-82-4	118
Cyclopentadiene	542-92-7	6,000
Cyclophosphamide	50-18-0	5.23
Cyhexatin	13121-70-5	1,176
2,4-D, salts and esters	94-75-7	6,000
Dacarbazine	4342-03-4	0.0635
DDE	72-55-9	6,000

Air Contaminant Name	CAS Number <sup>1</sup>	Reporting Level (lbs/yr)
Demeton	8065-48-3	24.9
Diacetone alcohol	123-42-2	6,000
2,4-Diaminoanisole sulfate	39156-41-7	240
2,4-Diaminotoluene (Toluene-2,4-diamine)	95-80-7 <sup>2</sup>	0.808
Diazinon	333-41-5	23.5
Diazomethane	334-88-3	80.9
Dibenz(a,h)acridine	226-36-8	8.08
Dibenz(a,j)acridine	224-42-0	8.08
Dibenz(a,h)anthracene	53-70-3	0.74
7H-Dibenzo(c,g)carbazole	194-59-2	0.808
Dibenzofurans	132-64-9 <sup>2</sup>	6,000
Dibenzo(a,e)pyrene	192-65-4	0.808
Dibenzo(a,h)pyrene	189-64-0	0.0808
Dibenzo(a,i)pyrene	189-55-9	0.0808
Dibenzo(a,l)pyrene	191-30-0	0.0808
3 Diborane	19287-45-7	26.6
1,2-Dibromoethane (Ethylene Dibromide; EDB)	106-93-4	4.04
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.468
2-N-Dibutylaminoethanol	102-81-8	834
Dibutylphenyl phosphate	2528-36-1	826
Dibutyl phthalate (Di-n-butyl phthalate)	84-74-2	1,176
o-Dichlorobenzene (1,2-Dichlorobenzene)	95-50-1	6,000
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	80.8
3,3'-Dichlorobenzidine	91-94-1	2.61
1,3-Dichloro-5,5-dimethyl hydantoin	118-52-5	47.1
Dichlorodiphenyltrichloroethane (DDT)	50-29-3	9.16
1,1-Dichloroethane (Ethylidene dichloride)	75-34-3	6,000
1,2-Dichloroethane (Ethylene dichloride; EDC)	107-06-2	34.2
Dichloroethyl ether (Bis(2-chloroethyl)ether)	111-44-4	6,000
1,2-Dichloroethylene	540-59-0	6,000
1,1-Dichloro-1-nitroethane	594-72-9	2,771
1,3-Dichloropropene	542-75-6	222
2,2-Dichloropropionic acid	75-99-0	1,176
Dichlorvos	62-73-7	44.4
Dicrotophos	141-66-2	58.8
Dicyclopentadiene	77-73-6	6,000
Dieldrin	60-57-1	58.8
Diethanolamine	111-42-2	471
Diethylamine	109-89-7	3,519
2-Diethylaminoethanol	100-37-8	2,255
Diethylene triamine	111-40-0	993
Diethyl hexyl phthalate (Bis(2-ethyl hexyl) phthalate; Di-sec-octyl phthalate; DEHP)	117-81-7	1,176
Diethyl phthalate	84-66-2	1,176
Diethylstilbestrol (DES)	56-53-1	0.00888
Diethyl sulfate	64-67-5	1.22
Diethyl ketone	96-22-0	100,000
1,1-Difluoroethane	75-37-6	6,000
Diglycidyl ether (DGE)	2238-07-5	125
Diglycidyl resorcinol ether	101-90-6	1.81
1,8-Dihydroxyanthraquinone (Danthron)	117-10-2	40.4
Diisobutyl ketone	108-83-8	6,000
Diisopropylamine	108-18-9	4,869
N,N-Dimethyl acetamide	127-19-5	6,000
Dimethylamine	124-40-3	2,169
4-Dimethylaminoazobenzene	60-11-7	0.683
Dimethylaniline (N,N-Dimethylaniline)	121-69-7	5,830
3,3'-Dimethylbenzidine (o-Tolidine)	119-93-7	1.22
Dimethyl carbamoyl chloride	79-44-7	0.24
Dimethylethoxysilane	14857-34-2	501
N,N-Dimethylformamide	68-12-2	2,665
1,1-Dimethylhydrazine	57-14-7	1.22
Dimethylphthalate	131-11-3	1,176
Dimethyl sulfate	77-78-1	1.22
Dinitolrmeide	148-01-6	1,176
Dinitrobenzene (mixtures and isomers)	528-29-0 <sup>2</sup>	243
Dinitro-o-cresol (4,6-Dinitro-o-cresol)	534-52-1	47.1



Air Contaminant Name	CAS Number <sup>1</sup>	Reporting Level (lbs/yr)
2,4-Dinitrophenol	51-28-5	6,000
Dinitrotoluene (mixtures and isomers)	25321-14-6 <sup>2</sup>	47.1
n-Dioctyl phthalate	117-84-0	6,000
1,4-Dioxane (1,4-Diethylene oxide)	123-91-1	115
Dioxathion	78-34-2	47.1
Diquat, respirable dust (various compounds) (Diquat dibromide)	2764-72-9 <sup>2</sup>	23.5
Diquat, total dust (various compounds) (Diquat dibromide)	2764-72-9 <sup>2</sup>	118
Direct black 38 (Benzidine-based dye)	1937-37-7	0.423
Direct blue 6 (Benzidine-based dye)	2602-46-2	0.423
Disperse Blue 1	2475-45-8	683
Disulfiram	97-77-8	471
Disulfoton	298-04-4	23.5
Divinyl benzene (mixtures and isomers)	1321-74-0 <sup>2</sup>	6,000
Endosulfan	115-29-7	23.5
Endrin	72-20-8	23.5
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106-89-8	88.8
EPN	2104-64-5	23.5
1,2-Epoxybutane (1,2-Butylene oxide)	106-88-7	1,777
Ethanolamine	141-43-5	1,763
Ethion	563-12-2	94.1
4 2-Ethoxyethanol (Ethylene glycol monoethyl ether; EGEE; cellosolve)	110-80-5	4,336
4 2-Ethoxyethyl acetate (Ethylene glycol monoethyl ether acetate; EGEEA; cellosolve acetate)	111-15-9	6,000
Ethyl acetate	141-78-6	100,000
Ethyl acrylate	140-88-5	4,817
Ethylamine (Ethanamine)	75-04-7	2,169
Ethyl amyl ketone	541-85-5	6,000
Ethyl benzene	100-41-4	6,000
Ethyl bromide	74-96-4	5,243
Ethyl tert-butyl ether (ETBE)	637-92-3	4,916
Ethyl butyl ketone	106-35-4	6,000
Ethyl chloride (Chloroethane)	75-00-3	6,000
Ethyl cyanoacrylate	7085-85-0	241
Ethylene chlorohydrin	107-07-3	1,077
Ethylenediamine	107-15-3	5,783
Ethylene glycol vapor and aerosol	107-21-1	6,000
Ethylene oxide	75-21-8	10.1
Ethylene thiourea	96-45-7	68.3
Ethylenimine (Aziridine)	151-56-4	207
Ethylidene norbornene	16219-75-3	6,000
N-Ethylmorpholine	100-74-3	5,542
Ethyl silicate	78-10-4	6,000
Fenamiphos	22224-92-6	23.5
Fensulfothion	115-90-2	23.5
Fenthion	55-38-9	47.1
Fine mineral fibers (includes mineral fiber emissions from facilities manufacturing or processing glass, rock or slag fibers, or other mineral derived fibers, of average diameter 1 micrometer or less)		6,000 <sup>2</sup>
Flour Dust (inhalable fraction)		118 <sup>2</sup>
Fluorides, (inorganics), as F		588 <sup>2</sup>
3 Fluorine	7782-41-4	366
Fonofos	944-22-9	23.5
Formaldehyde	50-00-0	68.3
Formamide	75-12-7	4,334
Formic acid	64-18-6	2,214
Furan	110-00-9	1.22
Furfural	98-01-1	1,849
Furfuryl alcohol	98-00-0	6,000
3 Germanium tetrahydride	7782-65-2	147
Glutaraldehyde	111-30-8	67
Glycidol	556-52-5	1.22
Glycol ethers		6,000 <sup>2</sup>
Graphite (all forms except graphite fiber)	7782-42-5	471
3 Halon-1211 (Bromochlorodifluoromethane)	353-59-3	6,000
3 Halon-1301 (Bromotrifluoromethane)	75-63-8	6,000
3 Halon-2402 (Dibromotetrafluoroethane)	124-73-2	6,000

Air Contaminant Name	CAS Number <sup>1</sup>	Reporting Level (lbs/yr)
Heptachlor and heptachlor epoxide	76-44-8	11.8
Hexachlorobenzene (HCB)	118-74-1	0.471
Hexachlorobutadiene	87-68-3	50.2
Hexachlorocyclopentadiene	77-47-4	26.2
Hexachloroethane	67-72-1	222
Hexachloronaphthalene	1335-87-1	47.1
Hexamethyl phosphoramide	680-31-9	1.22
Hexamethylene-1,6-diisocyanate (HDI)	822-06-0	0.888
n-Hexane	110-54-3	6,000
1,6-Hexanediamine	124-09-4	559
1-Hexene	592-41-6	6,000
sec-Hexyl acetate	108-84-9	6,000
Hexylene glycol	107-41-5	6,000
Hydrazine and hydrazine sulfate	302-01-2 <sup>2</sup>	0.181
3 Hydrochlorofluorocarbon-121 (HCFC-121)		6,000
3 Hydrochlorofluorocarbon-122 (HCFC-122)		6,000
3 Hydrochlorofluorocarbon-123 (HCFC-123; R-123)	306-83-2 <sup>2</sup>	6,000
3 Hydrochlorofluorocarbon-124 (HCFC-124; R-124)	63938-10-3 <sup>2</sup>	6,000
3 Hydrochlorofluorocarbon-131 (HCFC-131)		6,000
3 Hydrochlorofluorocarbon-132b (HCFC-132b)	1649-08-7	6,000
3 Hydrochlorofluorocarbon-133a (HCFC-133a)	75-88-7	6,000
3 Hydrochlorofluorocarbon-141b (HCFC-141b; R-141b)	1717-00-6	6,000
3 Hydrochlorofluorocarbon-21 (HCFC-21; Dichlorofluoromethane)	75-43-4	6,000
3 Hydrochlorofluorocarbon-221 (HCFC-221)		6,000
3 Hydrochlorofluorocarbon-222 (HCFC-222)		6,000
3 Hydrochlorofluorocarbon-223 (HCFC-223)		6,000
3 Hydrochlorofluorocarbon-224 (HCFC-224)		6,000
3 Hydrochlorofluorocarbon-225ca (HCFC-225ca)	422-56-0	6,000
3 Hydrochlorofluorocarbon-225cb (HCFC-225cb)	507-55-1	6,000
3 Hydrochlorofluorocarbon-226 (HCFC-226)		6,000
3 Hydrochlorofluorocarbon-231 (HCFC-231)		6,000
3 Hydrochlorofluorocarbon-232 (HCFC-232)		6,000
3 Hydrochlorofluorocarbon-233 (HCFC-233)		6,000
3 Hydrochlorofluorocarbon-234 (HCFC-234)		6,000
3 Hydrochlorofluorocarbon-235 (HCFC-235)		6,000
3 Hydrochlorofluorocarbon-241 (HCFC-241)		6,000
3 Hydrochlorofluorocarbon-242 (HCFC-242)		6,000
3 Hydrochlorofluorocarbon-243 (HCFC-243)		6,000
3 Hydrochlorofluorocarbon-244 (HCFC-244)		6,000
3 Hydrochlorofluorocarbon-251 (HCFC-251)		6,000
3 Hydrochlorofluorocarbon-252 (HCFC-252)		6,000
3 Hydrochlorofluorocarbon-253 (HCFC-253)		6,000
3 Hydrochlorofluorocarbon-261 (HCFC-261)		6,000
3 Hydrochlorofluorocarbon-262 (HCFC-262)		6,000
3 Hydrochlorofluorocarbon-271 (HCFC-271)		6,000
3 Hydrochlorofluorocarbon-31 (HCFC-31; R-31; Chlorofluoromethane)	593-70-4	6,000
Hydrogenated terphenyls	61788-32-7	1,160
3 Hydrogen bromide	10035-10-6	3,247
3 Hydrogen chloride (Hydrochloric acid; Muriatic acid)	7647-01-0	1,777
3 Hydrogen cyanide	74-90-8	1,699
3 Hydrogen fluoride (Hydrofluoric acid)	7664-39-3	803
3 Hydrogen peroxide	7722-84-1	327
3 Hydrogen sulfide	7783-06-4	3,279
Hydroquinone	123-31-9	471
2-Hydroxypropyl acrylate	999-61-1	626
Indeno(1,2,3-cd)pyrene	193-39-5	8.08
Indium	7440-74-6	23.5
3 Iodine	7553-56-2	340
Iron dextran complex	9004-66-4	1.22
Iron oxide dust and fume, as Fe	1309-37-1	1,176
Iron salts, soluble, as Fe		235
Isobutyl acetate	110-19-0	100,000
Isobutyl alcohol	78-83-1	6,000
Isooctyl alcohol	26952-21-6	6,000
Isophorone	78-59-1	6,000
Isophorone diisocyanate	4098-71-9	10.7

Air Contaminant Name	CAS Number <sup>1</sup>	Reporting Level (lbs/yr)
Isoprene	78-79-5	1.22
4 2-Isopropoxyethanol	109-59-1	6,000
Isopropylamine	75-31-0	2,843
Isopropyl glycidyl ether	4016-14-2	6,000
N-Isopropylaniline	768-52-5	2,602
Kaolin	1332-58-7	471
Kepon (Chlordecone)	143-50-0	0.193
Ketene	463-51-4	202
Lead Acetate, as Pb	301-04-2	11.1
Lead compounds	7439-92-1 <sup>2</sup>	6,000
Lead Phosphate, as Pb	7446-27-7	74
Lindane and other hexachlorocyclohexane isomers	58-89-9 <sup>2</sup>	2.87
Maleic anhydride	108-31-6	94.4
Manganese, elemental and inorganic compounds, as Mn	7439-96-5 <sup>2</sup>	47.1
Melphalan	148-82-3	0.024
3 Mercury, as Hg, alkyl compounds	7439-97-6 <sup>2</sup>	2.35
3 Mercury, as Hg, aryl compounds	7439-97-6 <sup>2</sup>	23.5
3 Mercury, as Hg, inorganic forms including metallic mercury	7439-97-6 <sup>2</sup>	5.88
Mesityl oxide	141-79-7	6,000
Mestranol	72-33-3	1.22
Methacrylic acid	79-41-4	6,000
Methanol	67-56-1	6,000
Methomyl	16752-77-5	588
Methoxychlor	72-43-5	6,000
4 2-Methoxyethanol (Methyl Cellosolve; EGME)	109-86-4	3,661
4 2-Methoxyethyl acetate (Methyl Cellosolve acetate; EGMEA)	110-49-6	5,684
4-Methoxyphenol	150-76-5	1,176
3 Methyl chloroform (1,1,1-Trichloroethane; TCA)	71-55-6	6,000
Methyl ethyl ketone (2-Butanone; MEK)	78-93-3	6,000
Methyl acetate	79-20-9	100,000
Methyl acetylene	74-99-7	100,000
Methyl acrylate	96-33-3	1,657
Methylacrylonitrile	126-98-7	646
Methylamine	74-89-5	1,494
Methyl n-amyyl ketone	110-43-0	6,000
N-Methyl aniline	100-61-8	516
Methyl bromide (Bromomethane)	74-83-9	444
Methyl n-butyl ketone	591-78-6	4,819
Methyl chloride (Chloromethane)	74-87-3	6,000
5-Methyl chrysene	3697-24-3	0.808
Methyl 2-cyanoacrylate	137-05-3	214
Methylcyclohexanol	25639-42-3	6,000
o-Methylcyclohexanone	583-60-8	6,000
Methyl demeton	8022-00-2	118
Methylene bisphenyl isocyanate (Methylene diphenyl isocyanate; MDI)	101-68-8	12
3 Methylene chloride (Dichloromethane)	75-09-2	1,890
4,4'-Methylene bis(2-chloroaniline) (MOCA)	101-14-4	2.07
Methylene bis(4-cyclohexylisocyanate)	5124-30-1	12.6
4,4'-Methylenedianiline (and dihydrochloride)	101-77-9 <sup>2</sup>	1.93
Methyl ethyl ketone peroxide	1338-23-4	472
Methyl formate	107-31-3	6,000
Methyl hydrazine	60-34-4	4.43
Methyl iodide (Iodomethane)	74-88-4	2,732
Methyl isoamyl ketone	110-12-3	6,000
Methyl isobutyl carbinol	108-11-2	6,000
Methyl isobutyl ketone (MIBK; Hexone)	108-10-1	6,000
Methyl isocyanate	624-83-9	11
Methyl methacrylate	80-62-6	6,000
N-Methyl-N'-nitro-N-nitrosoguanidine (MNNG)	70-25-7	0.37
Methyl parathion	298-00-0	47.1
alpha-Methyl styrene	98-83-9	6,000
Methyl tert-butyl ether (MTBE)	1634-04-4	6,000
Metribuzin	21087-64-9	1,176
Mevinphos (Phosdrin)	7786-34-7	21.2
Mirex	2385-85-5	0.174
Molybdenum, as Mo, metal and insoluble compounds	7439-98-7 <sup>2</sup>	2,353

Air Contaminant Name	CAS Number <sup>1</sup>	Reporting Level (lbs/yr)
Molybdenum, as Mo, soluble compounds	7439-98-7 <sup>2</sup>	1,176
Monocrotophos	6923-22-4	58.8
Morpholine	110-91-8	6,000
Mustard gas	505-60-2	1.22
Myleran (1,4-Butanediol dimethanesulphonate; busulphan)	55-98-1	1.22
Naled	300-76-5	706
Naphthalene	91-20-3	6,000
2-Naphthylamine	91-59-8	1.22
Nickel and compounds, as Ni	7440-02-0 <sup>2</sup>	3.42
Nickel carbonyl, as Ni	13463-39-3	3.42
Nickel subsulfide, as Ni	12035-72-2	1.85
Nitric acid	7697-37-2	1,213
Nitrilotriacetic acid	139-13-9	592
p-Nitroaniline	100-01-6	706
Nitrobenzene	98-95-3	1,185
4-Nitrobiphenyl	92-93-3	6,000
p-Nitrochlorobenzene	100-00-5	152
Nitroethane	79-24-3	6,000
Nitrogen mustards (2,2'-Dichloro-N-methyl-diethylamine)	51-75-2	1.22
3 Nitrogen oxides		10,000
Nitromethane	75-52-5	6,000
4-Nitrophenol	100-02-7	6,000
1-Nitropropane	108-03-2	6,000
2-Nitropropane	79-46-9	1.22
1-Nitropyrene	5522-43-0	8.08
N-Nitrosodi-n-butylamine	924-16-3	0.555
N-Nitrosodiethanolamine	1116-54-7	1.11
N-Nitrosodiethylamine	55-18-5	0.0207
N-Nitrosodimethylamine	62-75-9	0.0635
N-Nitrosodi-n-propylamine	621-64-7	0.444
N-Nitroso-N-ethylurea	759-73-9	0.115
N-Nitroso-N-methylurea	684-93-5	0.0261
N-Nitrosomethylvinylamine	4549-40-0	1.22
N-Nitrosomorpholine	59-89-2	0.468
N'-Nitrososarcosine	16543-55-8	1.22
N-Nitrosopiperidine	100-75-4	0.329
N-Nitrosopyrrolidine	930-55-2	1.46
N-Nitrososarcosine	13256-22-9	1.22
Nitrotoluene (mixtures and isomers)	88-72-2 <sup>2</sup>	2,639
Nitrous oxide	10024-97-2	6,000
Octachloronaphthalene	2234-13-1	23.5
Octachlorostyrene	29082-74-4	10
Octane (all isomers)	111-65-9 <sup>*2</sup>	100,000
Oestradiol (Estradiol)	50-28-2	0.0808
Oxalic acid	144-62-7	235
P,p'-Oxybis(benzenesulfonyl hydrazide)	80-51-3	23.5
Paraquat (respirable sizes) (Paraquat chloride)	1910-42-5 <sup>2</sup>	23.5
Parathion	56-38-2	23.5
3 Particulate matter		10,000
Pentachlorobenzene	608-93-5	10
Pentachloronaphthalene	1321-64-8	118
Pentachloronitrobenzene (Quintobenzene; PCNB)	82-68-8	118
Pentachlorophenol (PCP)	87-86-5	118
Pentane, all isomers	78-78-4 <sup>*2</sup>	100,000
Pentyl Acetate (mixtures and isomers)	628-63-7 <sup>2</sup>	6,000
3 Perchloroethylene (Tetrachloroethylene)	127-18-4	151
Perchloromethyl mercaptan	594-42-3	179
Perfluoroisobutylene	382-21-8	26.7
Persulfates (Ammonium, Potassium, Sodium)	7727-54-0 <sup>2</sup>	23.5
Perylene	198-55-0	10
Phenazopyridine and phenazopyridine hydrochloride	136-40-3 <sup>2</sup>	18.1
Phenol	108-95-2	4,528
Phenolphthalein	77-09-8	1.22
Phenothiazine	92-84-2	1,176
Phenylenediamine (mixtures and isomers)	106-50-3 <sup>2</sup>	23.5
Phenyl ether vapor	101-84-8	1,638

Air Contaminant Name	CAS Number <sup>1</sup>	Reporting Level (lbs/yr)
Phenyl glycidyl ether (PGE)	122-60-1	145
Phenylhydrazine	100-63-0	104
Phenyl mercaptan	108-98-5	530
Phenytoin and sodium salt of phenytoin	57-41-0 <sup>2</sup>	1.22
Phorate	298-02-2	11.8
Phosgene	75-44-5	95.2
3 Phosphine	7803-51-2	98.2
Phosphoric acid	7664-38-2	235
Phosphorus (yellow)	7723-14-0	23.8
Phosphorus oxychloride	10025-87-3	148
3 Phosphorus pentachloride	10026-13-8	200
Phosphorus pentasulfide	1314-80-3	235
3 Phosphorus trichloride	7719-12-2	264
Phthalic anhydride	85-44-9	1,425
Picric acid	88-89-1	23.5
Pindone	83-26-1	23.5
Platinum (metal)	7440-06-4	235
Platinum, soluble salts, as Pt	7440-06-4 <sup>2</sup>	0.471
PM10		10,000
Polybrominated biphenyls (PBBs; Bromodiphenyls)	59536-65-1 <sup>2</sup>	0.103
Polychlorinated biphenyls (PCBs; Chlorodiphenyls; Arochlor)	1336-36-3 <sup>2</sup>	0.05
7 Polycyclic organic matter (POM)		125
Potassium hydroxide	1310-58-3	654
Procarbazine and procarbazine hydrochloride	366-70-1 <sup>2</sup>	0.222
1,3-Propane sultone	1120-71-4	1.29
Propargyl alcohol	107-19-7	539
beta-Propiolactone	57-57-8	0.222
Propionaldehyde	123-38-6	6,000
Propionic acid	79-09-4	6,000
Propoxur (Baygon)	114-26-1	118
Propylene dichloride (1,2-Dichloropropane)	78-87-5	355
Propylene glycol monomethyl ether (PGME)	107-98-2	6,000
Propylene oxide	75-56-9	240
Propylenimine (2-Methyl aziridine; propylene imine)	75-55-8	1.22
Propylthiouracil	51-52-5	3.06
Pyrethrum	8003-34-7	1,176
Pyridine	110-86-1	3,373
Quinoline	91-22-5	6,000
Quinone	106-51-4	104
Resorcinol	108-46-3	6,000
Rhodium (metal) and insoluble compounds, as Rh	7440-16-6 <sup>2</sup>	235
Rhodium, soluble compounds, as Rh	7440-16-6 <sup>2</sup>	2.35
Rotenone (commercial)	83-79-4	1,176
Safrole	94-59-7	14.1
Selenium and compounds, as Se	7782-49-2 <sup>2</sup>	47.1
3 Silicon tetrahydride (Silane)	7803-62-5	1,545
Sodium Azide, as sodium azide or hydrazoic acid vapor	26628-22-8	95.7
Sodium bisulfite	7631-90-5	1,176
Sodium fluoroacetate	62-74-8	11.8
Sodium hydroxide	1310-73-2	654
Sodium metabisulfite	7681-57-4	1,176
3 Stibine (Antimony hydride)	7803-52-3	120
Stoddard solvent (Mineral spirits)	8052-41-3	6,000
Streptozotocin	18883-66-4	0.0287
Strong inorganic acid mists containing sulfuric acid (>35% by weight)	7664-93-9 <sup>2</sup>	1.22
Strychnine	57-24-9	35.3
Styrene oxide	96-09-3	6,000
Styrene, monomer	100-42-5	6,000
Sulfometuron methyl	74222-97-2	1,176
Sulfotep (TEDP)	3689-24-5	47.1
3 Sulfur dioxide	7446-09-5	10,000
Sulfur monochloride	10025-67-9	1,806
3 Sulfur tetrafluoride	7783-60-0	145
Sulfuric acid	7664-93-9	235
3 Sulfuryl fluoride	2699-79-8	4,911
Sulprofos	35400-43-2	235

Air Contaminant Name	CAS Number <sup>1</sup>	Reporting Level (lbs/yr)
Talc, containing no asbestos fibers	14807-96-6	471
Tantalum, metal and oxide dusts, as Ta	7440-25-7	1,176
Tellurium and compounds, except hydrogen telluride, as Te	13494-80-9 <sup>2</sup>	23.5
TEPP	107-49-3	11.8
Terphenyls	26140-60-3 <sup>2</sup>	1,635
1,2,3,4-Tetrachlorobenzene	634-66-2	10
1,2,4,5-Tetrachlorobenzene	95-94-3	10
2,3,7,8-Tetrachlorodibenzo-p-dioxin (Dioxin; 2,3,7,8-TCDD), as dioxin equivalents	1746-01-6 <sup>2</sup>	0.00005
1,1,2,2-Tetrachloroethane	79-34-5	1,615
Tetrachloronaphthalene	1335-88-2	471
1,1,1,2-Tetrafluoroethane	811-97-2	6,000
Tetrafluoroethylene	116-14-3	1.22
Tetrahydrofuran	109-99-9	6,000
Tetranitromethane	509-14-8	1.22
Thallium, elemental and soluble compounds, as Tl	7440-28-0 <sup>2</sup>	23.5
3 Thionyl chloride	7719-09-7	1,592
Thiourea	62-56-6	42.3
Thiram	137-26-8	235
Tin organic compounds, as Sn	7440-31-5 <sup>2</sup>	23.5
Tin, metal, oxides and inorganic compounds, except tin hydride, as Sn	7440-31-5 <sup>2</sup>	471
Titanium tetrachloride	7550-45-0	6,000
Toluene (Toluol)	108-88-3	6,000
2,4-/2,6-Toluene diisocyanate (mixtures and isomers) (TDI)	584-84-9 <sup>2</sup>	6.22
m- and p-Toluidine	108-44-1	2,062
o-Toluidine and o-toluidine hydrochloride and mixed isomers	95-53-4 <sup>2</sup>	17.4
3 Total reduced sulfur and reduced sulfur compounds		10,000
Tributyl phosphate	126-73-8	513
Tributyl tin	56-35-9	10
1,2,4-Trichlorobenzene	120-82-1	6,000
1,1,2-Trichloroethane	79-00-5	6,000
Trichloroethylene (Trichloroethene)	79-01-6	444
Trichloronaphthalene	1321-65-9	1,176
2,4,5-Trichlorophenol	95-95-4	6,000
2,4,6-Trichlorophenol	88-06-2	287
1,2,3-Trichloropropane	96-18-4	1.22
Triethanolamine	102-71-6	1,176
Triethylamine	121-44-8	974
Trifluralin	1582-09-8	6,000
1,3,5-Triglycidyl-s-triazinetrione	2451-62-9	11.8
Trimellitic anhydride	552-30-7	13.1
Trimethyl benzene (mixtures and isomers),	25551-13-7 <sup>2</sup>	6,000
Trimethylamine	75-50-3	2,844
2,2,4-Trimethylpentane	540-84-1	6,000
2,4,6-Trinitrotoluene (TNT)	118-96-7	23.5
Triorthocresyl phosphate	78-30-8	23.5
Triphenyl phosphate	115-86-6	706
Tris(1-aziridinyl)phosphine sulfide (Thiotepa)	52-24-4	0.261
Tris(2,3-dibromopropyl phosphate)	126-72-7	1.35
Tungsten, as W, metal and insoluble compounds	7440-33-7 <sup>2</sup>	1,176
Tungsten, as W, soluble compounds	7440-33-7 <sup>2</sup>	235
Uranium (natural), soluble and insoluble compounds, as U	7440-61-1 <sup>2</sup>	47.1
Urethane (Ethyl carbamate)	51-79-6	3.06
n-Valeraldehyde	110-62-3	6,000
Vanadium pentoxide, as V2O5, respirable dust and fume	1314-62-1	11.8
Vinyl acetate	108-05-4	6,000
Vinyl bromide	593-60-2	515
Vinyl chloride	75-01-4	101
Vinyl cyclohexene dioxide (4-vinyl-1-cyclohexene diepoxide)	106-87-6	1.22
4-Vinyl cyclohexene	100-40-3	104
Vinyl fluoride	75-02-5	443
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4	4,665
Vinylidene fluoride	75-38-7	100,000
Vinyl toluene	25013-15-4	6,000
3, 6 Volatile organic compounds (Reactive organic gases)		6,000
Warfarin	81-81-2	23.5
Xylene (mixtures and isomers) (Xylol; Dimethyl Benzene)	1330-20-7 <sup>2</sup>	6,000

Air Contaminant Name	CAS Number <sup>1</sup>	Reporting Level (lbs/yr)
m-Xylene-alpha, alpha'-diamine	1477-55-0	32.7
Xylidine (mixtures and isomers)	1300-73-8 <sup>2</sup>	583
Yttrium metal and compounds, as Y	7440-65-5 <sup>2</sup>	235
Zeolites (Erionite)	66733-21-9	1.22
Zirconium and compounds, as Zr	7440-67-7 <sup>2</sup>	1,176

<sup>1</sup>Chemical Abstract Service or CAS number refers to the unique chemical abstracts service registry number assigned to a specific chemical, isomer or mixture of chemicals or isomers and recorded in the CAS chemical registry system by the Chemical Abstracts Service, PO Box 3012, Columbus OH 43210, phone 1-614-447-3600.

<sup>2</sup>Indicates contaminants for which multiple CAS numbers may apply. For contaminants listed as a metal and its compounds, the given CAS number refers to the metal.

<sup>3</sup>Indicates contaminants for which a fee will be assessed under s. NR 410.04.

<sup>4</sup>Indicates compounds included in the glycol ethers group. These are included in the glycol ethers emission total reported along with the many other such compounds not listed individually by name.

<sup>5</sup>Glycol ethers include mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol, R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OR' where:

n = 1, 2 or 3

R = alkyl C7 or less or

R = phenyl or alkyl substituted phenyl

R' = H or alkyl C7 or less or OR' consists of carboxylic acid ester, sulfate, phosphate, nitrate or sulfonate.

<sup>6</sup>Organic Compounds that are not volatile organic compounds because of negligible photochemical reactivity are specified in s. NR 400.02 (162).

SECTION 31. NR 439.03(4)(a)1. is amended to read:

NR 439.03(4)(a)1. Hazardous air spills ~~which~~ that require immediate notice to the department under s. NR 445.08 s. NR 445.16.

SECTION 32. NR 445 Subchapter I (title) to precede s. NR 445.01 is created to read:

#### SUBCHAPTER I - GENERAL PROVISIONS

SECTION 33. NR 445.01(1)(a) is amended to read:

NR 445.01(1)(a) This chapter applies to all stationary air contaminant sources which may emit hazardous ~~pollutants~~ contaminants and to their owners and operators. ~~The emission limitations and control requirements of this chapter do not apply to a source of a hazardous air contaminant regulated under chs. NR 446 to 449 for the specific hazardous air contaminants regulated under those chapters or to a source which must meet a national emission standard for a hazardous air pollutant promulgated under section 112 of the act (42 USC 7412) for the specific air pollutant regulated under that standard.~~

SECTION 33A. NR 445.01(1)(a) Note is created to read:

NR 445.01(1)(a) **Note:** Owners and operators of sources of emissions of hazardous air contaminants associated with agricultural waste should refer to s. NR 445.08(6)(d) prior to undertaking any activities under this chapter.

SECTION 34. NR 445.01(1)(b) is repealed and recreated to read:

NR 445.01(1)(b) The emission limitations and control requirements in this chapter do not apply to hazardous air contaminants emitted by the emissions units, operations or activities that are regulated by an emission standard promulgated under section 112 of the Clean Air Act (42 USC 7412). Hazardous air contaminants "regulated by an emission standard promulgated under section 112 of the act" means the hazardous air contaminants that are regulated by section 112 by the name of the contaminant, by virtue of regulation of another substance as a surrogate for the contaminant, or by virtue of regulation of a species or category of hazardous air contaminants that includes the contaminant.

SECTION 35. NR 445.01(1)(b) Note is created to read:

NR 445.01(1)(b) **Note:** An example of regulated "by virtue of regulation of another substance as a surrogate" would be using the measurement of one contaminant to represent the emission rate of another, harder to measure contaminant. Examples of regulated "by virtue of the regulation of a species or category" would be the use of terms such as "volatile organic HAP" or "total HAP" emission in lieu of specifically naming individual hazardous air contaminants.

SECTION 36. NR 445.01(2) is amended to read:

NR 445.01(2) **PURPOSE.** This chapter is adopted under ss. 285.11, 285.13, 285.17 and 285.27, Stats., to establish emission limitations for hazardous ~~pollutants~~ contaminants from stationary sources.

SECTION 37. NR 445.02 (intro.) is amended to read:

NR 445.02 **Definitions.** (intro.) The definitions contained in ch. NR 400 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter ~~and in chs. NR 446 to 449:~~

SECTION 38. NR 445.02(3), (9) and (9m) are repealed.



SECTION 39. NR 445.02(1), (2), (4) to (8), (9g), (10) and (11) are renumbered NR 400.02(27m), 447.02(4) and 445.02(1m), (4), (7) to (9), (14), (15) and (18), and NR 445.02(1m), (7) and (9)(intro.), as renumbered, are amended to read:

NR 445.02(1m) "Best available control technology" or "BACT" means an emission limit for a hazardous air contaminant based on the maximum degree of reduction practically achievable as specified by the department on an individual case-by-case basis taking into account energy, economic and environmental impacts and other costs related to the source.

(7) "Hazardous air contaminant" means any air contaminant for which no ambient air quality standard is set in ch. NR 404 and which the department determines may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness, or may pose a significant threat to human health or the environment. The term hazardous air contaminant includes, but is not limited to, the substances listed in Tables 1 to 5 in s. NR 445.04 and Tables A, B or C in s. NR 445.07.

(9)(intro.) "Lowest achievable emission rate" or "LAER" means the rate of emission of a hazardous air contaminant which that reflects the more stringent of the following:

SECTION 40. NR445.02(1), (2), (3), (5), (6), (10) to (13), (16) and (17) are created to read:

NR 445.02(1) "Agricultural waste" means livestock manure, wastewater contaminated with livestock manure, animal waste byproducts and litter and bedding material contaminated, derived or mixed with livestock manure.

(2) "Certified control device" means a control device that is certified by either the California air resources board or the United States environmental protection agency.

(3) "Compression ignition internal combustion engine" or "CI engine" means an engine that has operating characteristics significantly similar to the theoretical diesel combustion cycle. The absence of a throttle to regulate intake air flow for controlling power during normal operation is indicative of a compression ignition engine. Combustion of the fuel in the engine proper is indicative of an internal combustion engine.

(5) "Due diligence" means one of the following:

(a) A reasonable search and inquiry conducted by the owner or operator to identify and quantify emissions of hazardous air contaminants at the facility and determine which, if any, are subject to regulation under the

provisions in subch. III and provisions identified in s. NR 445.06(1)(a) to (e). The search and inquiry is reasonable if it entails an investigation of all facility operations that the owner or operator determines are likely to cause emissions of any hazardous air contaminant based on a substance listed in this chapter being any of the following:

1. Listed on an approved material safety data sheet or otherwise brought into the facility.
2. Reasonably expected to be created through a combustion process or a manufacturing process.
3. Contained in or created through the treatment or disposal of raw materials or waste.

(b) A review by the owner or operator of a source of incidental emissions of the criteria listed in s. NR 445.11 to determine whether the source is subject to regulation under s. NR 445.07 and those provisions identified in NR 445.06(1)(a) to (e)

**Note:** Changes in methods of operations, process modifications and material substitution are examples that may be likely to cause changes in emissions of hazardous air contaminants.

(6) "Essential service" means an activity to provide any of the following:

- (a) Nuclear power plant emergency backup power generation.
- (b) Combustion turbine startup.
- (c) Safety or asset protection in an emergency situation.

**Note:** Examples include activities to provide emergency heating, ventilation, lighting, flood relief or spills response.

(10) "Manufactures" means the process of making, fabricating, finishing, constructing, forming or assembling a product from raw, unfinished, semifinished or finished materials engaged in by a manufacturer.

**Note:** Packing, bottling, labeling and packaging are all considered to be manufacturing activities.

(11) "Multipathway impact" means the impact determined through the use of a department approved air dispersion modeling and health effects risk screening analysis that incorporates multiple routes of exposures from the release of a hazardous air contaminant to the environment, including, inhalation and ingestion e.g., via soil, drinking water, or food.

(12) "On-road fuel oil" means any diesel fuel or distillate product that is used, intended for use or made available for use as a fuel in diesel motor vehicles or diesel motor vehicle engines.

(13) "Rebuilt" means to have removed components from a CI engine and to have substituted these components with similar components to such an extent that the fixed capital cost of the substituted components over any 12 consecutive month period exceeds 50% of the fixed capital cost that would be required to purchase a comparable entirely new CI engine.

(16) "Treats" or "treatment" means any method, technique or process, including thermal destruction, that changes the physical, chemical or biological character or composition of a hazardous air contaminant so as to render the contaminant less hazardous, safer for transport or management, amenable to recovery, convertible to another useable material or reduced in volume.

(17) "Unit risk factor" means the upper-bound excess lifetime cancer risk estimated to result from continuous exposure to a hazardous air contaminant concentration of 1 microgram per cubic meter in the air. A unit risk factor is expressed in units of cubic meters per microgram ( $m^3/\mu g$ ).

**Note:** The interpretation of unit risk would be as follows: a unit risk factor =  $1.5 \times 10^{-6} m^3/\mu g$  applied to a concentration of a hazardous air contaminant of  $1 \mu g/m^3$  would result in an expectation of 1.5 excess tumors to develop per 1,000,000 people exposed daily for a lifetime.

SECTION 41. NR 445.03 is amended to read:

**NR 445.03 General limitations.** No person may cause, allow or permit emissions into the ambient air of any hazardous substance in a quantity, or concentration or for a duration which that is injurious to human health, plant or animal life unless the purpose of that emission is for the control of plant or animal life. Hazardous substances include but are not limited to the hazardous air contaminants listed in Tables 1 to 5 A to C of s. NR 445.04 s. NR 445.07.

SECTION 42. NR 445 Subchapter II (title) to precede s. NR 445.04 is created to read:

**SUBCHAPTER II – EMISSION REQUIREMENTS FOR STATIONARY SOURCES PRIOR TO  
DEMONSTRATION OF COMPLIANCE WITH SUBCHAPTER III**

SECTION 43. NR 445.04 (title) is amended to read:

**NR 445.04 (title) Emission limits for ~~new or modified~~ sources last constructed or modified between October 1, 1988 and the effective date of this section... [revisor inserts date].**

SECTION 44. NR 445.04(intro.) is created to read:

NR 445.04 (intro.) The following requirements apply to sources last constructed or modified between October 1, 1988, or January 1, 1995 for sources subject to sub. (4r), and the effective date of this section... [revisor inserts date] prior to the applicable compliance dates for subch. III requirements specified in s. NR 445.08:

SECTION 45. NR 445.04(1)(intro.) and (a)2. are amended to read:

NR 445.04(1) TABLE 1 SUBSTANCES. (intro.) Except as provided in par. (c) or s. NR 406.07(2), no owner or operator of a stationary source on which construction or modification last commenced after between October 1, 1988 and the effective date of this section... [revisor inserts date] may cause, allow or permit emissions from a source of a hazardous air contaminant listed in Table 1 of this section in such quantity or duration as to cause ambient air concentrations off the source's property which that exceed the limits in par. (a) or (b).

(a)2. Ten percent of the threshold limit value - time weighted average established by the American conference of governmental industrial hygienists Conference of Governmental Industrial Hygienists, in the threshold limit values and biological exposure indices Threshold Limit Values and Biological Exposure Indices for 1987-1988, incorporated by reference in s. NR 484.11(2)(a), for any 24-hour averaging period if the hazardous air contaminant is emitted no more than 5 days in any consecutive 30-day period and if the department determines after complying with s. NR 445.06(1) s. NR 445.15(1) that such the limits will not pose a threat to public health or welfare.

SECTION 46. NR 445.04(2) (intro.) is amended to read:

NR 445.04(2) TABLE 2 SUBSTANCES. (intro.) Except as provided in par. (c), no owner or operator of a stationary source which that manufactures or processes pesticides, rodenticides, insecticides, herbicides or fungicides and on which construction or modification last commenced after between October 1, 1988 and the effective date of this section... [revisor inserts date], may cause, allow or permit emissions from the source of a hazardous air contaminant listed in Table 2 of this section in such quantity or duration as to cause ambient concentrations which that exceed the limits in par. (a) or (b).

SECTION 47. NR 445.04(3)(a) and (b) are amended to read:

NR 445.04(3)(a) *Group A.* Except as provided in par. (c), the owner or operator of any facility on which construction or modification last commenced after between October 1, 1988 and the effective date of this section... [revisor inserts date] and which that emits any hazardous air contaminant listed in group A of Table 3 of this section in amounts greater than those listed in group A of Table 3 shall control emissions of those hazardous air contaminants to a level which that is the lowest achievable emission rate. The lowest achievable emission rate shall be met by the emissions unit at the facility which that emits the greatest amount of the hazardous air contaminant. If application of the lowest achievable emission rate to this emissions unit does not reduce facility emissions of the hazardous air contaminant to a level less than the rate listed in group A of Table 3 for the hazardous air contaminant, then the lowest achievable emission rate shall be met by other emissions units at the facility which that emit decreasingly smaller amounts of the hazardous air contaminant until emissions from the facility are below the emission rate listed in group A of Table 3 or until all emissions units at the facility which that emit at least 10% of the rate listed in group A of Table 3 for the hazardous air contaminant have met the lowest achievable emissions rate. If application of lowest achievable emissions rate to these emissions units does not result in the control of at least 50% of the potential emissions of the hazardous air contaminant from the facility, then the department may require application of lowest achievable emission rate on a reasonable array of smaller emissions units which that emit the hazardous air contaminant.

(b) *Group B.* Except as provided in par. (c), the owner or operator of any facility on which construction or modification last commenced after between October 1, 1988 and the effective date of this section... [revisor inserts date] and which that emits any hazardous air contaminant listed in group B of Table 3 of this section in amounts greater than those listed in group B of Table 3 shall control emissions of those hazardous air contaminants to a level which that is the best available control technology. The best available control technology shall be met by the emissions unit at the facility which that emits the greatest amount of the hazardous air contaminant. If application of the best available control technology to this emissions unit does not reduce facility emissions of the hazardous air contaminant to a level less than the rate listed in group B of Table 3 for the hazardous air contaminant, then best available control technology shall be met by other emissions units at the facility which that emit decreasingly smaller amounts of the hazardous air contaminant until emissions from the facility are below the emission rate listed in group B of Table 3 or until all emissions units at the facility which that emit at least 10% of the rate listed in group B of Table 3 for the hazardous air contaminant have met best available control technology. If application of

best available control technology to these emissions units does not result in the control of at least 50% of the potential emissions of the hazardous air contaminant from the facility, then the department may require application of best available control technology on a reasonable array of smaller emissions units which that emit the hazardous air contaminant.

SECTION 48. NR 445.04(4)(intro.) and (a)2. are amended to read:

NR 445.04(4) TABLE 4 SUBSTANCES. (intro.) Except as provided in par. (c) or s. NR 406.07(2), no owner or operator of a stationary source on which construction or modification last commenced after between October 1, 1988 and the effective date of this section... [revisor inserts date] may cause, allow or permit emissions from a source of a hazardous air contaminant listed in Table 4 of this section in such quantity or duration as to cause ambient air concentrations off the source's property which that exceed the limits in par. (a) or (b).

(a)2. Ten percent of the threshold limit value - time weighted average established by the American ~~conference of governmental industrial hygienists~~ Conference of Governmental Industrial Hygienists, in the ~~threshold limit values and biological exposure indices~~ Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1990-1991, incorporated by reference in s. NR 484.11(2)(b), for any 24-hour averaging period if the hazardous air contaminant is emitted no more than 5 days in any consecutive 30-day period and if the department determines after complying with s. NR 445.06(1) s. NR 445.15(1) that such the limits will not pose a threat to public health or welfare.

SECTION 49. NR 445.04(4r)(a) is amended to read:

NR 445.04(4r)(a) *Annual limitations.* Except as provided in par. (b) or s. NR 406.07(2), no owner or operator of a stationary source on which construction or modification last commenced after between January 1, 1995 and the effective date of this section... [revisor inserts date], may cause, allow or permit emissions from the constructed or modified source of a hazardous air contaminant listed in Table 5 of this section in such quantity or duration as to cause ambient air concentrations off the source's property that exceed the reference concentration shown in Table 5 of this section on an annual basis.

SECTION 50. NR 445.04(5)(a) and (b) are amended to read:

NR 445.04(5)(a) Any owner or operator of a stationary source on which construction or modification last commenced after between October 1, 1988 and the effective date of this section... [revisor inserts date] and which that combusts municipal solid waste as defined in s. NR 500.03(150) or infectious waste shall comply with subs. (1) and (4) and shall control emissions of hazardous air contaminants listed in Table 3 of this section to a level which that is the lowest achievable emission rate.

(b) Any owner or operator of a stationary source on which construction or modification last commenced after between January 1, 1995 and the effective date of this section... [revisor inserts date] and which that combusts municipal solid waste as defined in s. NR 500.03(150) or infectious waste shall comply with sub. (4r).

SECTION 51. NR 445.04(6)(a) is amended to read:

NR 445.04(6)(a) *Compliance timing.* Except as provided for in pars. (d), (e) and (f), any source which that commences construction or modification after between October 1, 1988 and the effective date of this section... [revisor inserts date] shall meet the emission limitations in this section upon startup.

SECTION 52. NR 445.04(7) is repealed and recreated to read:

NR 445.04(7) CONTINUING REQUIREMENTS FOR SOURCES ISSUED A VARIANCE UNDER THIS SUBSECTION. An owner or operator of a source which has been granted a variance from an emission limitation in sub. (3)(a), (4r)(a) or (5) as it existed prior to the effective date of this section... [revisor inserts date] shall continue to comply with all provisions related to the approval until the time that one of the following are satisfied:

(a) The department modifies, extends or rescinds the variance in accord with the provisions of s. NR 445.12.

(b) The owner or operator demonstrates compliance with all of the applicable requirements in s. NR 445.07 and completes all necessary revisions to a permit in accord with the provisions in chs. NR 406 and 407, as applicable.

SECTION 53. NR 445.05 (title) is amended to read:

NR 445.05 (title) **Emission limits for existing sources constructed or last modified on or before October 1, 1988.**

SECTION 54. NR 445.05(intro.) is created to read:

NR 445.05(intro.) The following requirements apply to sources constructed or last modified on or before October 1, 1988, or January 1, 1995 for sources subject to sub. (4r), prior to the applicable compliance dates for subch. III requirements specified in s. NR 445.08:

SECTION 55. NR 445.05(1)(a)2. and (4)(a)2. are amended to read:

NR 445.05(1)(a)2. Ten percent of the threshold limit value - time weighted average established by the ~~American conference of governmental industrial hygienists~~ Conference of Governmental Industrial Hygienists in the ~~threshold limit values and biological exposure indices~~ Threshold Limit Values and Biological Exposure Indices for 1987-1988, incorporated by reference in s. NR 484.11(2)(a), for any 24-hour averaging period if the hazardous air contaminant is emitted no more than 5 days in any consecutive 30-day period and if the department determines after complying with s. NR 445.06(1) s. NR 445.15(1) that such ~~the~~ the limits will not pose a threat to public health or welfare.

(4)(a)2. Ten percent of the threshold limit value - time weighted average established by the ~~American conference of governmental industrial hygienists~~ Conference of Governmental Industrial Hygienists in the ~~threshold limit values and biological exposure indices~~ Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1990-1991, incorporated by reference in s. NR 484.11(2)(b), for any 24-hour averaging period if the hazardous air contaminant is emitted no more than 5 days in any consecutive 30-day period and if the department determines under s. NR 445.06(1) s. NR 445.15(1) that such ~~the~~ the limits will not pose a threat to public health or welfare.

SECTION 56. NR 445.05(6)(g) and (7) are repealed.

SECTION 57. NR 445.05(8) is repealed and recreated to read:

NR 445.05(8) CONTINUING REQUIREMENTS FOR SOURCES ISSUED A VARIANCE UNDER THIS SUBSECTION. An owner or operator of a source which has been granted a variance from an emission limitation in sub. (3)(a), (4r)(a) or



(5) as it existed prior to the effective date of this section... [revisor inserts date] shall continue to comply with all provisions related to the approval until the time that one of the following are satisfied:

(a) The department modifies, extends or rescinds the variance in accord with the provisions of s. NR 445.12.

(b) The owner or operator demonstrates compliance with all of the applicable requirements in s. NR 445.07 and completes all necessary revisions to a permit in accord with the provisions in chs. NR 406 and 407, as applicable.

SECTION 58. NR 445.06 (title) and (1) are renumbered NR 445.15 (title) and (1) and amended to read:

**NR 445.15 (title) Hazardous Additional provisions related to the control of hazardous air contaminant review contaminants.**

(1) The department staff shall consult with the department of health and ~~social~~ family services prior to incorporating an emission limit under ~~s. NR 445.04(1)(a)2. or 445.05(1)(a)2.~~ for any of the following requirements in an order or a permit:

(a) Section NR 445.04(1)(a)2.

(b) Section NR 445.04(4)(a)2.

(c) Section NR 445.05(1)(a)2.

(d) Section NR 445.05(4)(a)2.

(e) Section NR 445.07(1)(b).

SECTION 59. NR 445.06(2) and (3) are repealed.

SECTION 60. NR 445.06(4) is renumbered NR 445.15(4) and amended to read:

NR 445.15(4) The department staff shall consult with the department of health and ~~social~~ family services prior to establishing an emission limit, in a permit or order, for any hazardous air contaminant ~~which~~ that is not listed in Table 1, 2, 3 or 4 A, B or C of s. NR 445.04 or in ~~threshold limit values and biological exposure indices for 1990-1991 adopted by the American conference of governmental industrial hygienists, incorporated by reference in s. NR 484.11-s. NR 445.07.~~

SECTION 61. NR 445.06(5) is repealed.

SECTION 62. NR 445.07 and 445.08 are renumbered NR 445.15(5) and 445.16.

SECTION 63. NR 445 Subchapter III (title) and 445.06 to 445.14 are created to read:

**SUBCHAPTER III – EMISSION REQUIREMENTS, REVIEW AND NOTIFICATIONS FOR  
STATIONARY SOURCES OF HAZARDOUS AIR CONTAMINANTS**

**NR 445.06 Safe harbor.** (1) An owner or operator of a facility shall be deemed to be in compliance with this subchapter and the requirements in chs. NR 406, 407 and 438 listed in this subsection for any hazardous air contaminant listed in Table A, B or C of s. NR 445.07 if the owner or operator identifies the contaminant through due diligence and determines that the emissions of the identified contaminant are below the applicable regulatory threshold in this chapter or otherwise exempt from regulation, or the facility is meeting the applicable provisions in this subchapter. The requirements from chs. NR 406, 407 and 438 are the following:

(a) Section NR 406.04(2)(f) and (3)(a).

(b) Section NR 407.03(2)(d).

(c) Section NR 407.05(4)(c)1., 9. and 10.

(d) Section NR 407.09(1)(c)1.b.

(e) Section NR 438.03(1).

(2) The owner or operator will not be deemed to be out of compliance with this subchapter or with the provisions identified in sub. (1)(a) to (e) for any hazardous air contaminant listed in Table A, B or C of s. NR 445.07 for the period of time prior to either of the determinations in par. (a) or (b) being made if the determination is submitted in writing to the department within 21 calendar days, and no later than 90 calendar days after the determination, the owner or operator certifies that the facility is in compliance with all applicable requirements for the hazardous air contaminant. The department may, in writing, extend the 90 calendar days for achieving compliance. The determinations are as follows:

(a) That a hazardous air contaminant that was not previously identified through due diligence is later determined to be emitted from the facility in an amount greater than the applicable emission threshold in any of the following:

1. Table A, B or C of s. NR 445.07.

2. Section NR 406.04(2)(f) and (3)(a).

3. Section NR 407.03(2)(d).

4. Table 2 of s. NR 407.05.

5. Table 2 of s. NR 438.03.

(b) That a hazardous air contaminant previously identified and quantified is determined to be emitted in a greater amount, and that amount is greater than the applicable emission threshold for any of the provisions identified in par. (a) 1. to 5.

(3) Notwithstanding sub. (2), the department retains the authority to order the owner or operator to achieve compliance with applicable requirements within a specific time period shorter than the 90 calendar days whenever compliance in the shorter period of time is feasible and necessary to protect public health and the environment.

**Note:** The address for submittal of information and requests for an extension from the deadline in sub. (2) is:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707-7921

Attention: NR 445 Safe Harbor Determinations.

**NR 445.07 Emission thresholds, standards, control requirements and exemptions. (1) ALL SOURCES OF HAZARDOUS AIR CONTAMINANTS.** Except as provided in sub. (5), the following requirements apply:

(a) No owner or operator of a source may cause, allow or permit emissions of a hazardous air contaminant listed in Table A in such quantity or concentration or for such duration as to cause an ambient air concentration of the contaminant off the source property that exceeds the concentration in column (g) of Table A for the contaminant.

**Note:** Owners and operators of facilities emitting less than 3 tons of volatile organic compounds and 5 tons particulate matter on an annual basis, or who engage in limited or no manufacturing activities, should refer to s. NR 445.11 prior to determining applicable requirements under this section.

(b) The owner or operator of a source may request approval of an alternative to the emission limitation in par. (a). The alternative emission limitation is 10% of the threshold limit value - time weighted average established by the American Conference of Governmental Industrial Hygienists, in the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 2000, incorporated by reference in s. NR 484.11(2)(c), for any contaminant with a 24-hour averaging period in column (h) of Table A. The department may approve the alternative emission limitation if both of the following criteria are met:

1. The hazardous air contaminant is emitted no more than 5 days in any consecutive 30-day period.
2. The department determines, after consultation with the department of health and family services, that the alternative emission limitation will not pose a threat to public health or welfare.

(c) The owner or operator of a source that emits a hazardous air contaminant for which a control requirement is identified in column (i) of Table A in a quantity greater than the amount listed in column (c), (d), (e) or (f) of Table A for the contaminant shall control emissions of the contaminant to the level identified in column (i) of the table. The control requirement shall be applied according to the procedure in s. NR 445.08(2)(f).

(2) SOURCES OF HAZARDOUS AIR CONTAMINANTS FROM THE MANUFACTURE OR TREATMENT OF PESTICIDES, RODENTICIDES, INSECTICIDES, HERBICIDES OR FUNGICIDES. Except as provided in sub. (5)(c) and (d), in addition to the requirements of sub. (1), the owner or operator of a source that manufactures or treats pesticides, rodenticides, insecticides, herbicides or fungicides may not cause, allow or permit emissions of a hazardous air contaminant listed in Table B in a quantity or concentration or for a duration as to cause an ambient air concentration off the source property that exceeds the concentration in column (g) of Table B for the contaminant. For any hazardous air contaminant for which a control requirement is identified in column (i) of Table B that is emitted in an amount greater than the amount listed in column (c), (d), (e) or (f) of Table B for the contaminant, the owner or operator shall control emissions of the contaminant to the level identified in column (i) of the table. The control requirement shall be applied according to the procedure in s. NR 445.08(2)(f).

(3) SOURCES OF HAZARDOUS AIR CONTAMINANTS FROM THE MANUFACTURE OR TREATMENT OF PHARMACEUTICALS. Except as provided in sub. (5)(c) and (d), in addition to meeting the requirements of sub. (1), the owner or operator of a source that manufactures or treats pharmaceuticals and that emits a hazardous air contaminant for which a control requirement is identified in column (i) of Table C in an amount greater than the amount listed in column (c), (d), (e) or (f) of Table C for the contaminant shall control emissions of the contaminant

to the level identified in column (i) of the table. The control requirement shall be applied according to the procedure in s. NR 445.08(2)(f).

(4) MUNICIPAL SOLID WASTE AND INFECTIOUS WASTE INCINERATORS. (a) Except as provided for in par. (b), the owner or operator of a source that combusts municipal solid waste, as defined in s. NR 500.03(150), or infectious waste shall comply with sub. (1), and shall control emissions of hazardous air contaminants having a control requirement identified in column (i) in Table A, B or C to a level that is the lowest achievable emission rate. The control requirement shall be applied according to the procedure in s. NR 445.08(2)(f).

(b) A source that combusts no infectious waste and that combusts no municipal solid waste other than refuse derived fuel in a boiler is not subject to this subsection unless 50% or more of the boiler's heat input is obtained from the refuse derived fuel.

(5) EXEMPT EMISSIONS. Emissions from all of the following are exempt from the requirements of sub. (1) and emissions identified in pars. (c) and (d) are also exempt from the requirements of subs. (2) and (3):

(a) The combustion of group 1 virgin fossil fuels.

(b) The combustion of group 2 virgin fossil fuels vented from a stack that has downwash minimization stack height or a height approved by the department.

(c) A laboratory.

(d) 1. Indoor fugitive sources that emit any hazardous air contaminant with a concentration having a 1-hour or 24-hour average time period in column (h) in Table A, B or C.

2. Indoor fugitive sources that emit any hazardous air contaminant with a control requirement in column (i) or a concentration having an annual time period in column (h) in Table A, B or C that meet all of the following requirements:

a. The contaminant is exhausted to the ambient air through general building ventilation.

b. The contaminant has a threshold limit value established by the American Conference of Governmental Industrial Hygienists, in the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 2000, incorporated by reference in s. NR 484.11(2)(c).

c. The owner or operator of the source demonstrates to the department that the source is in compliance with applicable occupational safety and health administration requirements.

(e) Gasoline dispensing for any hazardous air contaminant with a control requirement in column (i) of Table A provided that one of the following applies:

1. The gasoline dispensing facility meets the requirements of s. NR 420.04(3)(b) to (i) and dispenses less than 2 million gallons of gasoline in any 12 consecutive month period.
2. The gasoline dispensing facility dispenses less than 1.25 million gallons of gasoline in any 12 consecutive month period.

(f) Combustion of wood in combustion units that operate with good combustion technology and that were constructed or last modified prior to October 1, 1988 for any hazardous air contaminant with a control requirement in column (i) of Table A. Good combustion technology means technology that provides for a minimization of hazardous air contaminants with control requirements in column (i). Good combustion technology will be determined on a case-by-case basis by the department, taking into account the type of fuel to be burned, the economic and environmental impacts of the combustion, and other costs related to the source. Good combustion technology may include consideration of factors such as temperature, residence time, carbon monoxide emissions, excess oxygen, and turbulence.

Note: See department draft memo dated July 7, 1999, Wood Combustion and Compliance with Chapter NR 445, for further information regarding the use of this exemption. The draft memo may be obtained by contacting the Combustion Process Section of the Bureau of Air Management at 608-266-7718.

(6) USE REQUIREMENTS FOR TABLES A, B AND C. (a) The emission thresholds in columns (c) to (f) in Tables A, B and C for any hazardous air contaminant may only be used if emissions from the source are vented to the atmosphere in a manner that meets both of the following:

1. The emissions are from an unobstructed discharge point.

Note: Valves designed to open and close at the point of discharge are not considered to be obstructions if they are open at time of emission.

2. The emissions are from a stack that is within 10 degrees of vertical.

(b) For purposes of calculating non-exempt, potential to emit emissions for comparison with the threshold rates in column (c), (d), (e) or (f) in the tables the owner or operator of a source shall do all of the following:

1. Combine non-exempt, potential to emit emissions for each contaminant for all stacks within each of the 4 stack categories.

2. Compare each group of non-exempt, potential to emit emissions against the respective threshold found in column (c), (d), (e) or (f) in the table.

(c) For any group of non-exempt, potential to emit emissions that exceeds the respective threshold in column (c), (d), (e) or (f), consider all non-exempt, potential emissions from the source in determining compliance with the applicable standard or control requirement.

Table A  
Emission Thresholds, Standards and Control Requirements for All Sources of Hazardous Air Contaminants

Hazardous Air Contaminant	CAS Number	Thresholds for Emission Points <sup>1</sup> (expressed as lbs/hr or lbs/yr)				Ambient Air Standard (per time period in column (h) expressed as micrograms per cubic meter)	Time Period for Standard and Threshold	Control Requirement
		(c) Emissions from Stacks <25 ft	(d) Emissions from Stacks 25 to <40 ft	(e) Emissions from Stacks 40 to <75 ft	(f) Emissions from Stacks ≥75 ft			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Acetaldehyde	75-07-0	3.36 808	10.7 3,318	20.6 7,900	55.3 27,845	4,504 N/A	1 Hr Annual	N/A BACT
Acetic acid	64-19-7	1.32	5.12	10.3	39.8	589	24 Hr Avg	N/A
Acetic anhydride	108-24-7	1.12	4.36	8.79	33.9	501	24 Hr Avg	N/A
Acetonitrile	75-05-8	3.61	14	28.3	109	1,612	24 Hr Avg	N/A
Acetophenone	98-86-2	2.64	10.3	20.7	79.7	1,179	24 Hr Avg	N/A
Acrolein	107-02-8	0.0171	0.0545	0.105	0.281	22.9	1 Hr	N/A
Acrylamide	79-06-1	0.00161	0.00626	0.0126	0.0486	0.72	24 Hr Avg	N/A
		1.37	5.62	13.4	47.1	N/A	Annual	BACT
Acrylic acid	79-10-7	178	730	1,738	6,126	1	Annual	N/A
		0.317	1.23	2.48	9.56	141	24 Hr Avg	N/A
Acrylonitrile	107-13-1	26.1	107	256	901	N/A	Annual	BACT
Adipic Acid	124-04-9	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Adiponitrile	111-69-3	0.475	1.85	3.72	14.3	212	24 Hr Avg	N/A
Aflatoxins	1402-68-2	2.43	10	23.8	83.9	N/A	Annual	LAER
Allyl alcohol	107-18-6	0.0638	0.248	0.5	1.93	28.5	24 Hr Avg	N/A
Allyl chloride	107-05-1	0.168	0.653	1.32	5.07	75.1	24 Hr Avg	N/A
Allyl glycidyl ether	106-92-3	0.251	0.974	1.97	7.57	112	24 Hr Avg	N/A
Aluminum alkyls and soluble salts, as Al	7429-90-5	0.107	0.417	0.842	3.24	48	24 Hr Avg	N/A
Aluminum pyro powders, as Al	7429-90-5	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
o-Aminozotoluene (2-Aminozotoluene)	97-56-3	1.62	6.64	15.8	55.7	N/A	Annual	BACT
4-Aminobiphenyl	92-67-1	0.296	1.22	2.9	10.2	N/A	Annual	LAER
Ammonia	7664-41-7	17,769	73,000	173,810	612,587	100	Annual	N/A
		0.935	3.63	7.33	28.2	418	24 Hr Avg	N/A
Ammonium perfluorooctanoate	3825-26-1	0.000537	0.00209	0.00421	0.0162	0.24	24 Hr Avg	N/A
Aniline	62-53-3	0.409	1.59	3.21	12.4	183	24 Hr Avg	N/A
o-Anisidine and o-anisidine hydrochloride (mixtures and isomers)	29191-52-4	44.4	183	435	1,531	N/A	Annual	BACT
Antimony and compounds, as Sb	7440-36-0	0.0271	0.105	0.212	0.817	12.1	24 Hr Avg	N/A
Antimony trioxide	1309-64-4	35.5	0.104	0.211	0.811	12	24 Hr Avg	N/A
Arsenic, elemental and inorganic compounds, as As	7440-38-2	0.413	1.7	4.04	14.2	0.2	Annual	N/A
		0.00856	0.0333	0.0671	0.258	N/A	Annual	LAER
Arsine	7784-42-1	8.88	36.5	86.9	306	3.83	24 Hr Avg	N/A
Asbestos, all forms	1332-21-4	2.43	10	23.8	83.9	0.05	Annual	N/A
Azirdine (Ethyleneimine)	151-56-4	0.0473	0.184	0.371	1.43	N/A	Annual	LAER
Barium, soluble compounds, as Ba	7440-39-3	0.0269	0.104	0.211	0.811	21.1	24 Hr Avg	N/A
Benz(a)anthracene	56-55-3	16.2	66.4	158	557	12	24 Hr Avg	N/A
Benzene	71-43-2	228	936	2,228	7,854	N/A	Annual	BACT LAER



Hazardous Air Contaminant	CAS Number	Thresholds for Emission Points' (expressed as lbs/hr or lbs/yr)				Ambient Air Standard (per time period in column (h) expressed as micrograms per cubic meter)	Time Period for Standard and Threshold	Control Requirement
		(a)	(b)	(c)	(d)			
Benzidine	92-87-5	0.0265	0.109	0.259	0.914	N/A	Annual	LAER
Benzo(b)fluoranthene	205-99-2	2.43	10	23.8	83.9	N/A	Annual	BACT
Benzo(f)fluoranthene	205-82-3	2.43	10	23.8	83.9	N/A	Annual	BACT
Benzo(k)fluoranthene	207-08-9	2.43	10	23.8	83.9	N/A	Annual	BACT
Benzo(a)pyrene	50-32-8	1.62	6.64	15.8	55.7	N/A	Annual	BACT
Benzotrifluoride	98-07-7	2.43	10	23.8	83.9	N/A	Annual	BACT
Benzoyl chloride	98-88-4	0.215	0.684	1.31	3.53	287	1 Hr	N/A
Benzoyl peroxide	94-36-0	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Benzyl acetate	140-11-4	3.3	12.8	25.9	99.6	1,474	24 Hr Avg	N/A
Benzyl chloride	100-44-7	0.278	1.08	2.18	8.4	124	24 Hr Avg	N/A
Beryllium and beryllium compounds, as Be	7440-41-7	3.55	14.6	34.8	123	0.02	Annual	BACT
Biphenyl	92-52-4	0.0678	0.263	0.531	2.05	30.3	24 Hr Avg	N/A
Bis(2-chloroethyl)ether (Dichloroethyl ether)	111-44-4	1.57	6.1	12.3	47.4	702	24 Hr Avg	N/A
Bis(2-dimethylaminoethyl) ether (DMAEE)	3033-62-3	0.0176	0.0684	0.138	0.531	7.87	24 Hr Avg	N/A
Bis(2-ethyl hexyl) phthalate (Diethyl hexyl phthalate)	117-81-7	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Bismuth telluride, as Bi2Te3·Se-Doped	1304-82-1	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Borates, tetra, sodium salts, decahydrate	1303-96-4	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Borates, tetra, sodium salts, pentahydrate	1303-96-4	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
Boron tribromide	10294-33-4	0.765	2.44	4.69	12.6	1,025	1 Hr	N/A
Boron trifluoride	7637-07-2	0.207	0.66	1.27	3.4	277	1 Hr	N/A
Bromine	7726-95-6	0.0351	0.136	0.275	1.06	15.7	24 Hr Avg	N/A
Bromine pentafluoride	7789-30-2	0.0384	0.149	0.301	1.16	17.2	24 Hr Avg	N/A
Bromodichloromethane	75-27-4	48	197	470	1,656	N/A	Annual	BACT
Bromodiphenyls (Polybrominated biphenyls; PBBs)	59536-65-1	0.207	0.849	2.02	7.12	N/A	Annual	BACT
Bromoform	75-25-2	0.278	1.08	2.18	8.38	124	24 Hr Avg	N/A
1,3-Butadiene	106-99-0	6.35	26.1	62.1	219	N/A	Annual	BACT
2-Butoxyethanol (Ethylene glycol monobutyl ether; EGBE; Butyl Cellulosolve)	111-76-2	5.19	20.2	40.7	157	2,320	24 Hr Avg	N/A
n-Butyl acrylate	141-32-2	0.563	2.19	4.41	17	252	24 Hr Avg	N/A
n-Butylamine	109-73-9	1.12	3.56	6.84	18.4	1,496	1 Hr	N/A
n-butyl alcohol (n-Butanol)	71-36-3	11.3	36	69.3	186	15,157	1 Hr	N/A
Butylated hydroxyanisole (BHA)	25013-16-5	31,173	128,070	304,929	1,074,715	N/A	Annual	BACT
Butyl Cellulosolve (2-Butoxyethanol; ethylene glycol monobutyl ether; EGBE)	111-76-2	5.19	20.2	40.7	157	2,320	24 Hr Avg	N/A
tert-Butyl chromate, as Cr	1189-85-1	0.00747	0.0238	0.0457	0.123	10	1 Hr	N/A
n-Butyl glycidyl ether (BGE)	2426-08-6	0.148	0.608	1.45	5.1	N/A	Annual	LAER
n-Butyl lactate	138-22-7	7.15	27.8	56.1	216	3,195	24 Hr Avg	N/A
o-sec-Butylphenol	89-72-5	1.61	6.24	12.6	48.5	717	24 Hr Avg	N/A
p-tert-Butyltoluene	98-51-1	1.65	6.41	12.9	49.8	737	24 Hr Avg	N/A
C.I. Basic Red 9 monohydrochloride	569-61-9	0.326	1.26	2.55	9.83	145	24 Hr Avg	N/A
Cadmium and cadmium compounds, as Cd	7440-43-9	25	103	245	863	N/A	Annual	BACT
		0.987	4.06	9.66	34	N/A	Annual	LAER

Hazardous Air Contaminant	CAS Number	Thresholds for Emission Points <sup>1</sup> (expressed as lbs/hr or lbs/yr)				Ambient Air Standard (per time period in column (h) expressed as micrograms per cubic meter)	Time Period for Standard and Threshold	Control Requirement
		(a) Emissions from Stacks <25 ft	(b) Emissions from Stacks 25 to <40 ft	(c) Emissions from Stacks 40 to <75 ft	(d) Emissions from Stacks ≥75 ft			
Calcium cyanamide	156-62-7	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Calcium hydroxide	1305-62-0	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Calcium oxide	1305-78-8	0.107	0.417	0.842	3.24	48	24 Hr Avg	N/A
Camphor (synthetic)	76-22-2	0.669	2.6	5.24	20.2	299	24 Hr Avg	N/A
Caprolactam (aerosol and vapor)	105-60-2	1.24	4.83	9.74	37.5	555	24 Hr Avg	N/A
Carbon black	1333-86-4	0.188	0.73	1.47	5.68	84	24 Hr Avg	N/A
Carbon disulfide	75-15-0	124,381	511,000	1,216,667	4,288,112	700	Annual	N/A
Carbon tetrabromide	558-13-4	1.67	6.5	13.1	50.5	747	24 Hr Avg	N/A
Carbon tetrachloride	56-23-5	0.0729	0.283	0.571	2.2	32.6	24 Hr Avg	N/A
Carbonyl fluoride	353-50-4	118	487	1,159	4,084	N/A	Annual	BACT
Catechol (Pyrocatechol)	120-80-9	0.29	1.13	2.27	8.76	130	24 Hr Avg	N/A
Cellulosolve (2-Ethoxyethanol; EGEE)	110-80-5	1.21	4.7	9.48	36.5	540	24 Hr Avg	N/A
Cellulosolve acetate (2-Ethoxyethyl acetate; EGEEA)	111-15-9	0.99	3.85	7.76	29.9	442	24 Hr Avg	N/A
Refractory Ceramic Fibers (respirable size)	143-50-0	35,538	146,000	347,619	1,225,175	200	Annual	N/A
Cesium hydroxide	21351-79-1	1.45	5.64	11.4	43.8	649	24 Hr Avg	N/A
Chloroacetic acid	115-28-6	2.43	10	23.8	83.9	N/A	Annual	BACT
Chloroacetonitrile	143-50-0	0.386	1.59	3.78	13.3	48	24 Hr Avg	N/A
Chloroacetylene	115-28-6	68.3	281	668	2,356	N/A	Annual	BACT
Chloroacetylene oxide	55720-99-5	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Chlorinated paraffins (C12; 60% chlorine)	108171-26-2	71.1	292	695	2,450	N/A	Annual	BACT
Chlorine	7782-50-5	0.0779	0.303	0.611	2.35	34.8	24 Hr Avg	N/A
Chlorine dioxide	10049-04-4	0.0148	0.0576	0.116	0.447	6.62	24 Hr Avg	N/A
Chlorine trifluoride	7790-91-2	0.0282	0.0899	0.173	0.464	37.8	1 Hr	N/A
2-Chloroacetophenone	532-27-4	0.017	0.066	0.133	0.513	7.59	24 Hr Avg	N/A
Chlorobenzene (Monochlorobenzene)	108-90-7	2.47	9.61	19.4	74.7	1,105	24 Hr Avg	N/A
o-Chlorobenzylidene malonitrile	2698-41-1	0.0288	0.0917	0.176	0.473	38.6	1 Hr	N/A
1-Chloro-1,1-difluoroethane (Hydrochlorofluorocarbon-142b; HCFC-142b; R-142b)	75-68-3	8,884,381	36,500,000	86,904,762	306,293,706	50,000	Annual	N/A
Chlorodifluoromethane (Hydrochlorofluorocarbon-22; HCFC-22; R-22)	75-45-6	8,884,381	36,500,000	86,904,762	306,293,706	50,000	Annual	N/A
Chlorodiphenyls (Polychlorinated biphenyls; PCBs)	1336-36-3	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
1-Chloro-2,3-epoxypropane (Epichlorohydrin)	106-89-8	0.1	0.1	0.1	0.1	N/A	Annual	BACT
Chloroethane (Ethyl chloride)	75-00-3	0.102	0.395	0.797	3.07	45.4	24 Hr Avg	N/A
Chloroform	67-66-3	178	730	1,738	6,126	1	Annual	N/A
Chloromethane (Methyl chloride)	74-87-3	1,481	6,083	14,484	51,049	N/A	Annual	BACT
beta-Chloroprene	126-99-8	14.2	55.1	111	428	6,333	24 Hr Avg	N/A
		1,776,876	7,300,000	17,380,952	61,258,741	10,000	Annual	N/A
		2.62	10.2	20.6	79.2	1,172	24 Hr Avg	N/A
		77.3	317	756	2,663	N/A	Annual	BACT
		5.55	21.5	43.5	167	2,478	24 Hr Avg	N/A
		2.43	10	23.8	83.9	N/A	Annual	LAER