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

[8]Glycol ethers ~~means any compound which can be described by the following chemical formula: R(OCH$_2$CH$_2$)$_n$-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$_2$CH$_2$)$_n$-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[7]	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
Aluminum pyro powders, as Al	3	7429-90-5 *	235

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number[7]	Inclusion Level (lbs/yr)
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 Bi2Te3: 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
Captan	2, 3, 6	133-06-2	235

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number[7]		Inclusion Level (lbs/yr)
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
Crotonaldehyde	3	4170-30-3	*	56.3

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number[7]	Inclusion Level (lbs/yr)
Crufomate	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-Dihydroxyanthroquinone (Danthron)	3	117-10-2	8.08
Diisobutyl ketone	3	108-83-8	2,000

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number[7]	Inclusion Level (lbs/yr)
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
Formamide	3	75-12-7	867

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number[7]		Inclusion Level (lbs/yr)
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[8]	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
2-Hydroxypropyl acrylate	3	999-61-1		125

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number[7]	Inclusion Level (lbs/yr)
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
Isooctyl 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
Kepone (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 (MethylCellosolve 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-amyl 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
N-Methyl-N'-nitro-N-nitrosoguanidine (MNNG)	3	70-25-7	0.074

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number[7]	Inclusion Level (lbs/yr)
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'-Nitrosonornicotine	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
Phenylenediamine (mixtures and isomers)	2, 3	106-50-3 *	4.71

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number[7]	Inclusion Level (lbs/yr)
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
Talc, containing no asbestos fibers	3	14807-96-6	94.1

Air Contaminant Name	Sources of Regulation (See Footnotes Below)	CAS Number[7]		Inclusion Level (lbs/yr)
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
Tetranitromethane	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-triazinetrione	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) (Xylol; 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
Zirconium and compounds, as Zr	3	7440-67-7	*	235

[1] Criteria pollutant or criteria pollutant precursor.
[2] Federal hazardous air pollutant listed under section 112(b) of the act.
[3] State hazardous air pollutant.
[4] Federal New Source Performance Standard.
[5] Stratospheric ozone depleting substance.
[6] Pesticides, rodenticides, insecticides, herbicides and fungicides.
[7] 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.
[8] Glycol ethers 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.
*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 vinylidine flouride.

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_{10}, 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

[5] 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 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_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 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[1]	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 [2]	471
	Aluminum pyro powders, as Al	7429-90-5 [2]	1,176
	o-Aminoazotoluene (2-Aminoazotoluene)	97-56-3	0.808
	4-Aminobiphenyl	92-67-1	0.148
	Amitrole	61-82-5	3.29
3	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 [2]	22.2
	Antimony and compounds, as Sb	7440-36-0 [2]	118
	Antimony trioxide	1309-64-4	17.8
	ANTU	86-88-4	70.6
	Arsenic, elemental and inorganic compounds, as As	7440-38-2 [2]	0.207
3	Arsine	7784-42-1	4.44
	Asbestos, all forms	1332-21-4 [2]	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 [2]	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[1]	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 [2]	0.37
	Biphenyl	92-52-4	297
	Bischloroethyl nitrosourea	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 [2]	1,176
	Borates, tetra, sodium salts, pentahydrate	1303-96-4 [2]	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 [2]	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)	[2]	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[1]	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 [2]	118
	Chromium (VI): Chromic acid mists and dissolved Cr (VI) aerosols, as Cr	7440-47-3 [2]	0.074
	Chromium (VI): compounds and particulates	7440-47-3 [2]	0.074
	Chromyl chloride, as Cr	14977-61-8	0.074
	Cobalt, elemental, and inorganic compounds, as Co	7440-48-4 [2]	4.71
3	Coke oven emissions	[2]	1.43
	Copper and compounds, fume, as Cu	7440-50-8 [2]	47.1
	Copper and compounds, dusts and mists, as Cu	7440-50-8 [2]	235
	p-Cresidine	120-71-8	20.7
	Cresol (mixtures and isomers)	1319-77-3 [2]	5,203
	Crotonaldehyde	4170-30-3 [2]	281
	Crufomate	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 [2]	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[1]	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 [2]	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 [2]	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-Dihydroxyanthroquinone (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
	Dinitolmide	148-01-6	1,176
	Dinitrobenzene (mixtures and isomers)	528-29-0 [2]	243
	Dinitro-o-cresol (4,6-Dinitro-o-cresol)	534-52-1	47.1

	Air Contaminant Name	CAS Number[1]	Reporting Level (lbs/yr)
	2,4-Dinitrophenol	51-28-5	6,000
	Dinitrotoluene (mixtures and isomers)	25321-14-6 [2]	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 [2]	23.5
	Diquat, total dust (various compounds) (Diquat dibromide)	2764-72-9 [2]	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 [2]	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)	[2]	6,000
	Flour Dust (inhalable fraction)	[2]	118
	Fluorides, (inorganics), as F	[2]	588
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	[2]	6,000
	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[1]	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 [2]	0.181
3	Hydrochlorofluorocarbon-121 (HCFC-121)	[2]	6,000
3	Hydrochlorofluorocarbon-122 (HCFC-122)	[2]	6,000
3	Hydrochlorofluorocarbon-123 (HCFC-123; R-123)	306-83-2 [2]	6,000
3	Hydrochlorofluorocarbon-124 (HCFC-124; R-124)	63938-10-3 [2]	6,000
3	Hydrochlorofluorocarbon-131 (HCFC-131)	[2]	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)	[2]	6,000
3	Hydrochlorofluorocarbon-222 (HCFC-222)	[2]	6,000
3	Hydrochlorofluorocarbon-223 (HCFC-223)	[2]	6,000
3	Hydrochlorofluorocarbon-224 (HCFC-224)	[2]	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)	[2]	6,000
3	Hydrochlorofluorocarbon-231 (HCFC-231)	[2]	6,000
3	Hydrochlorofluorocarbon-232 (HCFC-232)	[2]	6,000
3	Hydrochlorofluorocarbon-233 (HCFC-233)	[2]	6,000
3	Hydrochlorofluorocarbon-234 (HCFC-234)	[2]	6,000
3	Hydrochlorofluorocarbon-235 (HCFC-235)	[2]	6,000
3	Hydrochlorofluorocarbon-241 (HCFC-241)	[2]	6,000
3	Hydrochlorofluorocarbon-242 (HCFC-242)	[2]	6,000
3	Hydrochlorofluorocarbon-243 (HCFC-243)	[2]	6,000
3	Hydrochlorofluorocarbon-244 (HCFC-244)	[2]	6,000
3	Hydrochlorofluorocarbon-251 (HCFC-251)	[2]	6,000
3	Hydrochlorofluorocarbon-252 (HCFC-252)	[2]	6,000
3	Hydrochlorofluorocarbon-253 (HCFC-253)	[2]	6,000
3	Hydrochlorofluorocarbon-261 (HCFC-261)	[2]	6,000
3	Hydrochlorofluorocarbon-262 (HCFC-262)	[2]	6,000
3	Hydrochlorofluorocarbon-271 (HCFC-271)	[2]	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	[2]	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[1]	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
	Kepone (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 [2]	6,000
	Lead Phosphate, as Pb	7446-27-7	74
	Lindane and other hexachlorocyclohexane isomers	58-89-9 [2]	2.87
	Maleic anhydride	108-31-6	94.4
	Manganese, elemental and inorganic compounds, as Mn	7439-96-5 [2]	47.1
	Melphalan	148-82-3	0.024
3	Mercury, as Hg, alkyl compounds	7439-97-6 [2]	2.35
3	Mercury, as Hg, aryl compounds	7439-97-6 [2]	23.5
3	Mercury, as Hg, inorganic forms including metallic mercury	7439-97-6 [2]	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-amyl 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 [2]	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 [2]	2,353

	Air Contaminant Name	CAS Number[1]	Reporting Level (lbs/yr)
	Molybdenum, as Mo, soluble compounds	7439-98-7 [2]	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 [2]	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-methyldiethylamine)	51-75-2	1.22
3	Nitrogen oxides	[2]	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'-Nitrosonornicotine	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 [2]	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 [*2]	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 [2]	23.5
	Parathion	56-38-2	23.5
3	Particulate matter	[2]	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 [*2]	100,000
	Pentyl Acetate (mixtures and isomers)	628-63-7 [2]	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 [2]	23.5
	Perylene	198-55-0	10
	Phenazopyridine and phenazopyridine hydrochloride	136-40-3 [2]	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 [2]	23.5
	Phenyl ether vapor	101-84-8	1,638

	Air Contaminant Name	CAS Number[1]	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 [2]	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 [2]	0.471
	PM10	[2]	10,000
	Polybrominated biphenyls (PBBs; Bromodiphenyls)	59536-65-1 [2]	0.103
	Polychlorinated biphenyls (PCBs; Chlorodiphenyls; Arochlor)	1336-36-3 [2]	0.05
7	Polycylic organic matter (POM)	[2]	125
	Potassium hydroxide	1310-58-3	654
	Procarbazine and procarbazine hydrochloride	366-70-1 [2]	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 [2]	235
	Rhodium, soluble compounds, as Rh	7440-16-6 [2]	2.35
	Rotenone (commercial)	83-79-4	1,176
	Safrole	94-59-7	14.1
	Selenium and compounds, as Se	7782-49-2 [2]	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 [2]	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[1]	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 [2]	23.5
	TEPP	107-49-3	11.8
	Terphenyls	26140-60-3 [2]	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 [2]	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 [2]	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 [2]	23.5
	Tin, metal, oxides and inorganic compounds, except tin hydride, as Sn	7440-31-5 [2]	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 [2]	6.22
	m- and p-Toluidine	108-44-1	2,062
	o-Toluidine and o-toluidine hydrochloride and mixed isomers	95-53-4 [2]	17.4
3	Total reduced sulfur and reduced sulfur compounds	[2]	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 [2]	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 [2]	1,176
	Tungsten, as W, soluble compounds	7440-33-7 [2]	235
	Uranium (natural), soluble and insoluble compounds, as U	7440-61-1 [2]	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
	Vinylidine fluoride	75-38-7	100,000
	Vinyl toluene	25013-15-4	6,000
3, 6	Volatile organic compounds (Reactive organic gases)	[2]	6,000
	Warfarin	81-81-2	23.5
	Xylene (mixtures and isomers) (Xylol; Dimethyl Benzene)	1330-20-7 [2]	6,000

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

[1]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.

[2]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.

[3]Indicates contaminants for which a fee will be assessed under s. NR 410.04.

[4]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.

[5]Glycol ethers 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.

[6]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 preceed 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 = 1.5×10^{-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 preceed 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 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 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 CONTAMINTS. 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 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[1] (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
		Emissions from Stacks <25 ft	Emissions from Stacks 25 to <40 ft	Emissions from Stacks 40 to <75 ft	Emissions from Stacks ≥75 ft			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Acetaldehyde	75-07-0	3.36	10.7	20.6	55.3	4,504	1 Hr	N/A
		808	3,318	7,900	27,845	N/A	Annual	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-Aminoazotoluene (2-Aminoazotoluene)	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
		0.0271	0.105	0.212	0.817	12.1	24 Hr Avg	N/A
Antimony and compounds, as Sb	7440-36-0	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Antimony trioxide	1309-64-4	35.5	146	348	1,225	0.2	Annual	N/A
Arsenic, elemental and inorganic compounds, as As	7440-38-2	0.413	1.7	4.04	14.2	N/A	Annual	LAER
Arsine	7784-42-1	0.00856	0.0333	0.0671	0.258	3.83	24 Hr Avg	N/A
		8.88	36.5	86.9	306	0.05	Annual	N/A
Asbestos, all forms	1332-21-4	2.43	10	23.8	83.9	N/A	Annual	LAER
Aziridine (Ethylenimine)	151-56-4	0.0473	0.184	0.371	1.43	21.1	24 Hr Avg	N/A
Barium, soluble compounds, as Ba	7440-39-3	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Benz(a)anthracene	56-55-3	16.2	66.4	158	557	N/A	Annual	BACT
Benzene	71-43-2	228	936	2,228	7,854	N/A	Annual	LAER

Hazardous Air Contaminant	CAS Number	Thresholds for Emission Points[1] (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
		Emissions from Stacks <25 ft	Emissions from Stacks 25 to <40 ft	Emissions from Stacks 40 to <75 ft	Emissions from Stacks ≥75 ft			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
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(j)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
Benzotrichloride	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	0.74	3.04	7.24	25.5	N/A	Annual	BACT
		3.55	14.6	34.8	123	0.02	Annual	N/A
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 Cellosolve)	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 Cellosolve (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
		0.148	0.608	1.45	5.1	N/A	Annual	LAER
n-Butyl glycidyl ether (BGE)	2426-08-6	7.15	27.8	56.1	216	3,195	24 Hr Avg	N/A
n-Butyl lactate	138-22-7	1.61	6.24	12.6	48.5	717	24 Hr Avg	N/A
o-sec-Butylphenol	89-72-5	1.65	6.41	12.9	49.8	737	24 Hr Avg	N/A
p-tert-Butyltoluene	98-51-1	0.326	1.26	2.55	9.83	145	24 Hr Avg	N/A
C.I. Basic Red 9 monohydrochloride	569-61-9	25	103	245	863	N/A	Annual	BACT
Cadmium and cadmium compounds, as Cd	7440-43-9	0.987	4.06	9.66	34	N/A	Annual	LAER

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		Emissions from Stacks <25 ft	Emissions from Stacks 25 to <40 ft	Emissions from Stacks 40 to <75 ft	Emissions from Stacks ≥75 ft			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
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
		1.67	6.5	13.1	50.5	747	24 Hr Avg	N/A
Carbon tetrabromide	558-13-4	0.0729	0.283	0.571	2.2	32.6	24 Hr Avg	N/A
Carbon tetrachloride	56-23-5	118	487	1,159	4,084	N/A	Annual	BACT
Carbonyl fluoride	353-50-4	0.29	1.13	2.27	8.76	130	24 Hr Avg	N/A
Catechol (Pyrocatechol)	120-80-9	1.21	4.7	9.48	36.5	540	24 Hr Avg	N/A
Cellosolve (2-Ethoxyethanol; EGEE)	110-80-5	0.99	3.85	7.76	29.9	442	24 Hr Avg	N/A
		35,538	146,000	347,619	1,225,175	200	Annual	N/A
Cellosolve acetate (2-Ethoxyethyl acetate; EGEEA)	111-15-9	1.45	5.64	11.4	43.8	649	24 Hr Avg	N/A
Refractory Ceramic Fibers (respirable size)		2.43	10	23.8	83.9	N/A	Annual	BACT
Cesium hydroxide	21351-79-1	0.107	0.417	0.842	3.24	48	24 Hr Avg	N/A
Chlordecone (Kepone)	143-50-0	0.386	1.59	3.78	13.3	N/A	Annual	BACT
Chlorendic acid	115-28-6	68.3	281	668	2,356	N/A	Annual	BACT
Chlorinated diphenyl 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 malononitrile	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
		0.1	0.1	0.1	0.1	N/A	Annual	BACT
1-Chloro-2,3-epoxypropane (Epichlorohydrin)	106-89-8	0.102	0.395	0.797	3.07	45.4	24 Hr Avg	N/A
		178	730	1,738	6,126	1	Annual	N/A
		1,481	6,083	14,484	51,049	N/A	Annual	BACT
Chloroethane (Ethyl chloride)	75-00-3	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
Chloroform	67-66-3	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
Chloromethane (Methyl chloride)	74-87-3	5.55	21.5	43.5	167	2,478	24 Hr Avg	N/A
beta-Chloroprene	126-99-8	2.43	10	23.8	83.9	N/A	Annual	LAER

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		Emissions from Stacks <25 ft	Emissions from Stacks 25 to <40 ft	Emissions from Stacks 40 to <75 ft	Emissions from Stacks ≥75 ft			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
		1.95	7.56	15.2	58.7	869	24 Hr Avg	N/A
o-Chlorostyrene	2039-87-4	15.2	59.2	119	460	6,802	24 Hr Avg	N/A
o-Chlorotoluene	95-49-8	13.9	54	109	420	6,213	24 Hr Avg	N/A
Chromium (metal) and compounds other than Chromium (VI)	7440-47-3	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Chromium (VI): Chromic acid mists and dissolved Cr (VI) aerosols, as Cr	7440-47-3	1.42	5.84	13.9	49	0.008	Annual	N/A
		0.148	0.608	1.45	5.1	N/A	Annual	LAER
Chromium (VI): compounds and particulates	7440-47-3	17.8	73	174	613	0.1	Annual	N/A
		0.148	0.608	1.45	5.1	N/A	Annual	LAER
Chromyl chloride, as Cr	14977-61-8	0.148	0.608	1.45	5.1	N/A	Annual	LAER
		0.00851	0.0331	0.0667	0.257	3.8	24 Hr Avg	N/A
Cobalt, elemental, and inorganic compounds, as Co	7440-48-4	0.00107	0.00417	0.00842	0.0324	0.48	24 Hr Avg	N/A
Coke oven emissions		2.87	11.8	28	98.8	N/A	Annual	LAER
Copper and compounds, dusts and mists, as Cu	7440-50-8	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
Copper and compounds, fume, as Cu	7440-50-8	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
p-Cresidine	120-71-8	41.3	170	404	1,425	N/A	Annual	BACT
Cresol (mixtures and isomers)	1319-77-3	1.19	4.62	9.31	35.9	531	24 Hr Avg	N/A
Crotonaldehyde	4170-30-3	0.0642	0.205	0.393	1.06	86	1 Hr	N/A
Cumene (Isopropyl benzene)	98-82-8	13.2	51.3	103	399	5,899	24 Hr Avg	N/A
Cyanamide	420-04-2	0.107	0.417	0.842	3.24	48	24 Hr Avg	N/A
Cyanides, (inorganics), as CN	143-33-9	0.373	1.19	2.29	6.13	500	1 Hr	N/A
Cyanogen	460-19-5	1.14	4.44	8.96	34.5	511	24 Hr Avg	N/A
Cyanogen chloride	506-77-4	0.0563	0.179	0.345	0.926	75.4	1 Hr	N/A
Cyclohexanol	108-93-0	11	42.7	86.2	332	4,916	24 Hr Avg	N/A
Cyclohexanone	108-94-1	5.17	20.1	40.5	156	2,311	24 Hr Avg	N/A
Cyclohexylamine	108-91-8	2.18	8.46	17.1	65.8	973	24 Hr Avg	N/A
Cyclonite	121-82-4	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Cyclopentadiene	542-92-7	10.9	42.3	85.4	329	4,866	24 Hr Avg	N/A
Danthron (1,8-Dihydroxyanthroquinone)	117-10-2	80.8	332	790	2,784	N/A	Annual	BACT
DBCP (1,2-Dibromo-3-chloropropane)	96-12-8	0.935	3.84	9.15	32.2	N/A	Annual	BACT
DDT (Dichlorodiphenyltrichloroethane)	50-29-3	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
		18.3	75.3	179	632	N/A	Annual	BACT
Diacetone alcohol	123-42-2	12.8	49.6	100	385	5,701	24 Hr Avg	N/A
2,4-Diaminoanisole sulfate	39156-41-7	480	1,973	4,698	16,556	N/A	Annual	BACT
2,4-Diaminotoluene (Toluene-2,4-diamine)	95-80-7	1.62	6.64	15.8	55.7	N/A	Annual	BACT
Diazomethane	334-88-3	0.0185	0.0718	0.145	0.558	8.25	24 Hr Avg	N/A
Dibenz(a,h)acridine	226-36-8	16.2	66.4	158	557	N/A	Annual	BACT
Dibenz(a,j)acridine	224-42-0	16.2	66.4	158	557	N/A	Annual	BACT
Dibenz(a,h)anthracene	53-70-3	1.48	6.08	14.5	51	N/A	Annual	BACT
7H-Dibenzo(c,g)carbazole	194-59-2	1.62	6.64	15.8	55.7	N/A	Annual	BACT
Dibenzo(a,e)pyrene	192-65-4	1.62	6.64	15.8	55.7	N/A	Annual	BACT
Dibenzo(a,h)pyrene	189-64-0	0.162	0.664	1.58	5.57	N/A	Annual	BACT
Dibenzo(a,i)pyrene	189-55-9	0.162	0.664	1.58	5.57	N/A	Annual	BACT
Dibenzo(a,l)pyrene	191-30-0	0.162	0.664	1.58	5.57	N/A	Annual	BACT

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		Emissions from Stacks <25 ft	Emissions from Stacks 25 to <40 ft	Emissions from Stacks 40 to <75 ft	Emissions from Stacks ≥75 ft			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Diborane	19287-45-7	0.00608	0.0236	0.0477	0.184	2.72	24 Hr Avg	N/A
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.935	3.84	9.15	32.2	N/A	Annual	BACT
1,2-Dibromoethane (Ethylene dibromide; EDB)	106-93-4	8.08	33.2	79	278	N/A	Annual	BACT
2-N-Dibutylaminoethanol	102-81-8	0.19	0.74	1.49	5.75	85.1	24 Hr Avg	N/A
Dibutylphenyl phosphate	2528-36-1	0.189	0.733	1.48	5.7	84.3	24 Hr Avg	N/A
Dibutyl phthalate (Di-n-butyl phthalate)	84-74-2	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
o-Dichlorobenzene (1,2-Dichlorobenzene)	95-50-1	8.07	31.4	63.3	244	3,608	24 Hr Avg	N/A
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	162	664	1,580	5,569	N/A	Annual	BACT
		142,150	584,000	1,390,476	4,900,699	800	Annual	N/A
		3.23	12.5	25.3	97.5	1,443	24 Hr Avg	N/A
3,3'-Dichlorobenzidine	91-94-1	5.23	21.5	51.1	180	N/A	Annual	BACT
1,3-Dichloro-5,5-dimethyl hydantoin	118-52-5	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
Dichlorodiphenyltrichloroethane (DDT)	50-29-3	18.3	75.3	179	632	N/A	Annual	BACT
		0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
1,1-Dichloroethane (Ethylidene dichloride)	75-34-3	21.7	84.5	170	656	9,715	24 Hr Avg	N/A
1,2-Dichloroethane (Ethylene dichloride; EDC)	107-06-2	68.3	281	668	2,356	N/A	Annual	BACT
		2.17	8.45	17	65.6	971	24 Hr Avg	N/A
Dichloroethyl ether (Bis(2-chloroethyl)ether)	111-44-4	1.57	6.1	12.3	47.4	702	24 Hr Avg	N/A
1,1-Dichloroethylene (Vinylidene chloride)	75-35-4	1.06	4.14	8.35	32.2	476	24 Hr Avg	N/A
1,2-Dichloroethylene	540-59-0	42.6	166	334	1,286	19,033	24 Hr Avg	N/A
Dichloromethane (Methylene chloride)	75-09-2	9.33	36.2	73.1	282	4,168	24 Hr Avg	N/A
		3,781	15,532	36,981	130,338	N/A	Annual	BACT
1,1-Dichloro-1-nitroethane	594-72-9	0.633	2.46	4.96	19.1	283	24 Hr Avg	N/A
1,2-Dichloropropane (Propylene dichloride)	78-87-5	18.6	72.3	146	562	8,318	24 Hr Avg	N/A
		711	2,920	6,952	24,503	4	Annual	N/A
Dicyclopentadiene	77-73-6	1.45	5.64	11.4	43.8	649	24 Hr Avg	N/A
Diethanolamine	111-42-2	0.107	0.417	0.842	3.24	48	24 Hr Avg	N/A
Diethylamine	109-89-7	0.803	3.12	6.3	24.3	359	24 Hr Avg	N/A
2-Diethylaminoethanol	100-37-8	0.515	2	4.04	15.5	230	24 Hr Avg	N/A
Diethylene triamine	111-40-0	0.227	0.881	1.78	6.84	101	24 Hr Avg	N/A
Diethyl hexyl phthalate (Bis(2-ethyl hexyl) phthalate; Di-sec-octyl phthalate; DEHP)	117-81-7	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Diethyl phthalate	84-66-2	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Diethyl sulfate	64-67-5	2.43	10	23.8	83.9	N/A	Annual	BACT
1,4-Diethylene oxide (1,4-Dioxane)	123-91-1	3.87	15	30.3	117	1,730	24 Hr Avg	N/A
		231	948	2,257	7,956	N/A	Annual	BACT
1,1-Difluoroethane	75-37-6	7,107,505	29,200,000	69,523,810	245,034,965	40,000	Annual	N/A
Diglycidyl ether (DGE)	2238-07-5	0.0286	0.111	0.224	0.863	12.8	24 Hr Avg	N/A
Diglycidyl resorcinol ether	101-90-6	3.63	14.9	35.5	125	N/A	Annual	BACT
1,8-Dihydroxyanthroquinone (Danthron)	117-10-2	80.8	332	790	2,784	N/A	Annual	BACT
Diisobutyl ketone	108-83-8	7.81	30.4	61.2	236	3,490	24 Hr Avg	N/A
Diisopropylamine	108-18-9	1.11	4.32	8.71	33.6	497	24 Hr Avg	N/A
N,N-Dimethyl acetamide	127-19-5	1.91	7.44	15	57.8	855	24 Hr Avg	N/A

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(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Dimethylamine	124-40-3	0.495	1.92	3.88	14.9	221	24 Hr Avg	N/A
4-Dimethylaminoazobenzene	60-11-7	1.37	5.62	13.4	47.1	N/A	Annual	BACT
Dimethylaniline (N,N-Dimethylaniline)	121-69-7	1.33	5.17	10.4	40.2	595	24 Hr Avg	N/A
Dimethyl benzene (Xylene(mixtures and isomers); Xylol)	1330-20-7	23.3	90.6	183	704	10,421	24 Hr Avg	N/A
3,3'-Dimethylbenzidine (o-Tolidine)	119-93-7	2.43	10	23.8	83.9	N/A	Annual	BACT
Dimethyl carbamoyl chloride	79-44-7	0.48	1.97	4.7	16.6	N/A	Annual	BACT
Dimethylethoxysilane	14857-34-2	0.114	0.445	0.897	3.46	51.1	24 Hr Avg	N/A
N,N-Dimethylformamide	68-12-2	1.61	6.24	12.6	48.5	717	24 Hr Avg	N/A
		5,331	21,900	52,143	183,776	30	Annual	N/A
1,1-Dimethylhydrazine	57-14-7	2.43	10	23.8	83.9	N/A	Annual	BACT
Dimethylphthalate	131-11-3	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Dimethyl sulfate	77-78-1	2.43	10	23.8	83.9	N/A	Annual	BACT
		0.0277	0.108	0.217	0.836	12.4	24 Hr Avg	N/A
Dinitolmide	148-01-6	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Dinitrobenzene (mixtures and isomers)	528-29-0	0.0554	0.215	0.434	1.67	24.8	24 Hr Avg	N/A
Dinitrotoluene (mixtures and isomers)	25321-14-6	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
1,4-Dioxane (1,4-Diethylene oxide)	123-91-1	231	948	2,257	7,956	N/A	Annual	BACT
		3.87	15	30.3	117	1,730	24 Hr Avg	N/A
Dioxins and Furans, chlorinated (2,3,7,8-Tetrachlorodibenzo-p-dioxin), as equivalents	1746-01-6	0.0001	0.0001	0.0001	0.0001	N/A	Annual	LAER
Direct black 38 (Benzidine-based dye)	1937-37-7	0.846	3.48	8.28	29.2	N/A	Annual	BACT
Direct blue 6 (Benzidine-based dye)	2602-46-2	0.846	3.48	8.28	29.2	N/A	Annual	BACT
Disperse Blue 1	2475-45-8	1,367	5,615	13,370	47,122	N/A	Annual	BACT
Disulfiram	97-77-8	0.107	0.417	0.842	3.24	48	24 Hr Avg	N/A
Divinyl benzene (mixtures and isomers)	1321-74-0	2.86	11.1	22.4	86.3	1,278	24 Hr Avg	N/A
EGBE (2-Butoxyethanol; Ethylene glycol monobutyl ether; butyl cellosolve)	111-76-2	5.19	20.2	40.7	157	2,320	24 Hr Avg	N/A
EGEE (2-Ethoxyethanol; Ethylene glycol monoethyl ether; cellosolve)	110-80-5	0.99	3.85	7.76	29.9	442	24 Hr Avg	N/A
		35,538	146,000	347,619	1,225,175	200	Annual	N/A
EGEEA (2-Ethoxyethyl acetate; Ethylene glycol monoethyl ether acetate; Cellosolve acetate)	111-15-9	1.45	5.64	11.4	43.8	649	24 Hr Avg	N/A
EGME (2-Methoxyethanol; MethylCellosolve)	109-86-4	0.836	3.25	6.55	25.2	373	24 Hr Avg	N/A
EGMEA (2-Methoxyethyl acetate; MethylCellosolve acetate)	110-49-6	1.3	5.04	10.2	39.2	580	24 Hr Avg	N/A
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106-89-8	178	730	1,738	6,126	1	Annual	N/A
		0.102	0.395	0.797	3.07	45.4	24 Hr Avg	N/A
		1,481	6,083	14,484	51,049	N/A	Annual	BACT
1,2-Epoxybutane (1,2-Butylene oxide)	106-88-7	3,554	14,600	34,762	122,517	20	Annual	N/A
Erionite (Zeolites)	66733-21-9	2.43	10	23.8	83.9	N/A	Annual	LAER
Ethanamine (Ethylamine)	75-04-7	0.495	1.92	3.88	14.9	221	24 Hr Avg	N/A
Ethanolamine	141-43-5	0.403	1.56	3.16	12.2	180	24 Hr Avg	N/A
2-Ethoxyethanol (Ethylene glycol monoethyl ether; EGEE; Cellosolve)	110-80-5	35,538	146,000	347,619	1,225,175	200	Annual	N/A
		0.99	3.85	7.76	29.9	442	24 Hr Avg	N/A

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2-Ethoxyethyl acetate (Ethylene glycol monoethyl ether acetate; EGEEA; cellosolve acetate)	111-15-9	1.45	5.64	11.4	43.8	649	24 Hr Avg	N/A
Ethyl acrylate	140-88-5	1.1	4.27	8.62	33.2	491	24 Hr Avg	N/A
Ethylamine (Ethanamine)	75-04-7	0.495	1.92	3.88	14.9	221	24 Hr Avg	N/A
Ethyl amyl ketone	541-85-5	7.04	27.4	55.2	213	3,146	24 Hr Avg	N/A
Ethyl benzene	100-41-4	23.3	90.6	183	704	10,421	24 Hr Avg	N/A
		177,688	730,000	1,738,095	6,125,874	1,000	Annual	N/A
Ethyl bromide	74-96-4	1.2	4.65	9.38	36.1	535	24 Hr Avg	N/A
Ethyl tert-butyl ether (ETBE)	637-92-3	1.12	4.36	8.8	33.9	501	24 Hr Avg	N/A
Ethyl butyl ketone	106-35-4	12.5	48.7	98.3	379	5,604	24 Hr Avg	N/A
Ethyl carbamate (Urethane)	51-79-6	6.13	25.2	59.9	211	N/A	Annual	BACT
Ethyl chloride (Chloroethane)	75-00-3	1,776,876	7,300,000	17,380,952	61,258,741	10,000	Annual	N/A
		14.2	55.1	111	428	6,333	24 Hr Avg	N/A
Ethyl cyanoacrylate	7085-85-0	0.055	0.214	0.431	1.66	24.6	24 Hr Avg	N/A
Ethylene chlorohydrin	107-07-3	0.246	0.783	1.51	4.04	329	1 Hr	N/A
Ethylenediamine	107-15-3	1.32	5.13	10.3	39.9	590	24 Hr Avg	N/A
Ethylene dibromide (EDB; 1,2-Dibromoethane)	106-93-4	8.08	33.2	79	278	N/A	Annual	BACT
Ethylene dichloride (EDC; 1,2-Dichloroethane)	107-06-2	2.17	8.45	17	65.6	971	24 Hr Avg	N/A
		68.3	281	668	2,356	N/A	Annual	BACT
Ethylene glycol monobutyl ether (2-Butoxyethanol; EGBE; butyl cellosolve)	111-76-2	2,309,939	9,490,000	22,595,238	79,636,364	13,000	Annual	N/A
		5.19	20.2	40.7	157	2,320	24 Hr Avg	N/A
Ethylene glycol monoethyl ether (2-Ethoxyethanol; EGEE; cellosolve)	110-80-5	35,538	146,000	347,619	1,225,175	200	Annual	N/A
		0.99	3.85	7.76	29.9	442	24 Hr Avg	N/A
Ethylene glycol monoethyl ether acetate (2-Ethoxyethyl acetate; EGEEA; Cellosolve Acetate)	111-15-9	1.45	5.64	11.4	43.8	649	24 Hr Avg	N/A
Ethylene glycol vapor and aerosol	107-21-1	7.47	23.8	45.7	123	10,000	1 Hr	N/A
Ethylene oxide	75-21-8	20.2	83	198	696	N/A	Annual	LAER
Ethylene thiourea	96-45-7	137	562	1,337	4,712	N/A	Annual	BACT
Ethylenimine (Aziridine)	151-56-4	0.0473	0.184	0.371	1.43	21.1	24 Hr Avg	N/A
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3	21.7	84.5	170	656	9,715	24 Hr Avg	N/A
Ethylidene norbornene	16219-75-3	1.84	5.85	11.2	30.2	2,458	1 Hr	N/A
N-Ethylmorpholine	100-74-3	1.27	4.92	9.92	38.2	565	24 Hr Avg	N/A
Ethyl silicate	78-10-4	4.58	17.8	35.9	138	2,045	24 Hr Avg	N/A
Fenamiphos	22224-92-6	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Flour Dust (inhalable fraction)		0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Fluorides, (inorganics), as F		0.134	0.522	1.05	4.05	60	24 Hr Avg	N/A
Fluorine	7782-41-4	0.0835	0.324	0.654	2.52	37.3	24 Hr Avg	N/A
Formaldehyde	50-00-0	137	562	1,337	4,712	N/A	Annual	BACT
Formamide	75-12-7	0.99	3.84	7.76	29.9	442	24 Hr Avg	N/A
Formic acid	64-18-6	0.506	1.96	3.96	15.3	226	24 Hr Avg	N/A
Furan	110-00-9	2.43	10	23.8	83.9	N/A	Annual	BACT
Furfural	98-01-1	0.422	1.64	3.31	12.7	189	24 Hr Avg	N/A
Furfuryl alcohol	98-00-0	2.16	8.37	16.9	65.1	963	24 Hr Avg	N/A

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(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Germanium tetrahydride	7782-65-2	0.0337	0.131	0.264	1.02	15	24 Hr Avg	N/A
Glutaraldehyde	111-30-8	0.0153	0.0487	0.0936	0.251	20.5	1 Hr	N/A
Glycidol	556-52-5	0.325	1.26	2.55	9.83	145	24 Hr Avg	N/A
		2.43	10	23.8	83.9	N/A	Annual	BACT
Graphite (all forms except graphite fiber)	7782-42-5	0.107	0.417	0.842	3.24	48	24 Hr Avg	N/A
Hexachlorobenzene (HCB)	118-74-1	0.000107	0.000417	0.000842	0.00324	0.048	24 Hr Avg	N/A
		3.86	15.9	37.8	133	N/A	Annual	BACT
Hexachloroethane	67-72-1	0.52	2.02	4.08	15.7	232	24 Hr Avg	N/A
		444	1,825	4,345	15,315	N/A	Annual	BACT
Hexachloronaphthalene	1335-87-1	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
Hexamethyl phosphoramide	680-31-9	2.43	10	23.8	83.9	N/A	Annual	BACT
Hexamethylene-1,6-diisocyanate (HDI)	822-06-0	1.78	7.3	17.4	61.3	0.01	Annual	N/A
		0.00185	0.00718	0.0145	0.0558	0.826	24 Hr Avg	N/A
n-Hexane	110-54-3	35,538	146,000	347,619	1,225,175	200	Annual	N/A
		9.47	36.8	74.2	286	4,230	24 Hr Avg	N/A
1,6- Hexanediamine	124-09-4	0.128	0.496	1	3.85	57	24 Hr Avg	N/A
1-Hexene	592-41-6	5.55	21.6	43.5	167	2,478	24 Hr Avg	N/A
Hexone (Methyl isobutyl ketone; MIBK)	108-10-1	11	42.7	86.2	332	4,916	24 Hr Avg	N/A
sec-Hexyl acetate	108-84-9	15.8	61.5	124	478	7,078	24 Hr Avg	N/A
Hexylene glycol	107-41-5	9.02	28.7	55.2	148	12,083	1 Hr	N/A
Hydrazine and hydrazine sulfate	302-01-2	0.363	1.49	3.55	12.5	N/A	Annual	BACT
		0.000704	0.00274	0.00552	0.0213	0.315	24 Hr Avg	N/A
Hydrochloric acid (Hydrogen chloride; Muriatic acid)	7647-01-0	0.557	1.77	3.41	9.15	746	1 Hr	N/A
		3,554	14,600	34,762	122,517	20	Annual	N/A
Hydrogenated terphenyls	61788-32-7	0.265	1.03	2.08	7.99	118	24 Hr Avg	N/A
Hydrogen bromide	10035-10-6	0.741	2.36	4.54	12.2	993	1 Hr	N/A
Hydrogen chloride (Hydrochloric acid; Muriatic acid)	7647-01-0	3,554	14,600	34,762	122,517	20	Annual	N/A
		0.557	1.77	3.41	9.15	746	1 Hr	N/A
Hydrogen cyanide	74-90-8	0.388	1.24	2.38	6.38	520	1 Hr	N/A
Hydrogen fluoride (Hydrofluoric acid)	7664-39-3	0.183	0.584	1.12	3.01	246	1 Hr	N/A
Hydrogen peroxide	7722-84-1	0.0747	0.29	0.586	2.26	33.4	24 Hr Avg	N/A
Hydrogen sulfide	7783-06-4	0.749	2.91	5.87	22.6	335	24 Hr Avg	N/A
Hydroquinone	123-31-9	0.107	0.417	0.842	3.24	48	24 Hr Avg	N/A
2-Hydroxypropyl acrylate	999-61-1	0.143	0.555	1.12	4.32	63.9	24 Hr Avg	N/A
Indeno(1,2,3-cd)pyrene	193-39-5	16.2	66.4	158	557	N/A	Annual	BACT
Indium	7440-74-6	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Iodine	7553-56-2	0.0775	0.247	0.475	1.27	104	1 Hr	N/A
Iodomethane (Methyl iodide)	74-88-4	0.624	2.42	4.89	18.8	279	24 Hr Avg	N/A
Iron oxide dust and fume, as Fe	1309-37-1	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Iron salts, soluble, as Fe		0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
Isobutyl alcohol	78-83-1	8.14	31.6	63.8	246	3,638	24 Hr Avg	N/A
Isooctyl alcohol	26952-21-6	14.3	55.6	112	432	6,392	24 Hr Avg	N/A
Isophorone	78-59-1	2.11	6.72	12.9	34.7	2,826	1 Hr	N/A

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Isophorone diisocyanate	4098-71-9	0.00244	0.00949	0.0191	0.0737	1.09	24 Hr Avg	N/A
Isoprene	78-79-5	2.43	10	23.8	83.9	N/A	Annual	BACT
2-Isopropoxyethanol	109-59-1	5.72	22.2	44.8	173	2,556	24 Hr Avg	N/A
Isopropylamine	75-31-0	0.649	2.52	5.09	19.6	290	24 Hr Avg	N/A
Isopropylbenzene (Cumene)	98-82-8	13.2	51.3	103	399	5,899	24 Hr Avg	N/A
Isopropylglycidyl ether	4016-14-2	12.8	49.6	100	385	5,702	24 Hr Avg	N/A
N-Isopropylaniline	768-52-5	0.594	2.31	4.66	17.9	265	24 Hr Avg	N/A
Kaolin	1332-58-7	0.107	0.417	0.842	3.24	48	24 Hr Avg	N/A
Kepone (Chlordecone)	143-50-0	0.386	1.59	3.78	13.3	N/A	Annual	BACT
Ketene	463-51-4	0.0462	0.179	0.362	1.39	20.6	24 Hr Avg	N/A
Lead Acetate, as Pb	301-04-2	22.2	91.3	217	766	N/A	Annual	BACT
Lead Phosphate, as Pb	7446-27-7	148	608	1,448	5,105	N/A	Annual	BACT
Maleic anhydride	108-31-6	0.0215	0.0837	0.169	0.65	9.63	24 Hr Avg	N/A
Manganese, elemental and inorganic compounds, as Mn	7439-96-5	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
Mercury, as Hg, alkyl compounds	7439-97-6	0.000537	0.00209	0.00421	0.0162	0.24	24 Hr Avg	N/A
Mercury, as Hg, aryl compounds	7439-97-6	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Mercury, as Hg, inorganic forms including metallic mercury	7439-97-6	53.3	219	521	1,838	0.3	Annual	N/A
		0.00134	0.00522	0.0105	0.0405	0.6	24 Hr Avg	N/A
Mesityl oxide	141-79-7	3.23	12.6	25.4	97.6	1,445	24 Hr Avg	N/A
Methacrylic acid	79-41-4	3.78	14.7	29.7	114	1,690	24 Hr Avg	N/A
2-Methoxyethanol (Methyl Cellosolve; EGME)	109-86-4	0.836	3.25	6.55	25.2	373	24 Hr Avg	N/A
2-Methoxyethyl acetate (MethylCellosolve acetate; EGMEA)	110-49-6	1.3	5.04	10.2	39.2	580	24 Hr Avg	N/A
4-Methoxyphenol	150-76-5	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Methyl acrylate	96-33-3	0.378	1.47	2.97	11.4	169	24 Hr Avg	N/A
Methylacrylonitrile	126-98-7	0.147	0.573	1.16	4.45	65.9	24 Hr Avg	N/A
Methylamine	74-89-5	0.341	1.33	2.67	10.3	152	24 Hr Avg	N/A
Methyl n-amyl ketone	110-43-0	12.5	48.7	98.3	379	5,604	24 Hr Avg	N/A
N-Methyl aniline	100-61-8	0.118	0.457	0.923	3.55	52.6	24 Hr Avg	N/A
2-Methyl aziridine (Propylenimine; Propylene imine)	75-55-8	0.251	0.975	1.97	7.57	112	24 Hr Avg	N/A
		2.43	10	23.8	83.9	N/A	Annual	BACT
Methyl n-butyl ketone	591-78-6	1.1	4.27	8.62	33.2	492	24 Hr Avg	N/A
Methyl Cellosolve (2-Methoxyethanol; EGME)	109-86-4	0.836	3.25	6.55	25.2	373	24 Hr Avg	N/A
Methyl Cellosolve acetate (2-Methoxyethyl acetate; EGMEA)	110-49-6	1.3	5.04	10.2	39.2	580	24 Hr Avg	N/A
Methyl chloride (Chloromethane)	74-87-3	5.55	21.5	43.5	167	2,478	24 Hr Avg	N/A
5-Methyl chrysene	3697-24-3	1.62	6.64	15.8	55.7	N/A	Annual	BACT
Methyl 2-cyanoacrylate	137-05-3	0.0488	0.19	0.383	1.47	21.8	24 Hr Avg	N/A
Methylcyclohexanol	25639-42-3	12.5	48.7	98.3	379	5,604	24 Hr Avg	N/A
o-Methylcyclohexanone	583-60-8	12.3	47.9	96.6	372	5,505	24 Hr Avg	N/A
Methylene bisphenyl isocyanate (Methylene diphenyl isocyanate; MDI)	101-68-8	0.00275	0.0107	0.0215	0.083	1.23	24 Hr Avg	N/A
		107	438	1,043	3,676	0.6	Annual	N/A
Methylene chloride (Dichloromethane)	75-09-2	9.33	36.2	73.1	282	4,168	24 Hr Avg	N/A
		3,781	15,532	36,981	130,338	N/A	Annual	BACT
4,4'-Methylene bis(2-chloroaniline) (MOCA)	101-14-4	4.13	17	40.4	142	N/A	Annual	BACT

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Methylene bis(4-cyclohexylisocyanate)	5124-30-1	0.00288	0.0112	0.0226	0.087	1.29	24 Hr Avg	N/A
4,4'-Methylenedianiline (and dihydrochloride)	101-77-9	0.0436	0.169	0.341	1.31	19.5	24 Hr Avg	N/A
		3.86	15.9	37.8	133	N/A	Annual	BACT
Methyl ethyl ketone peroxide	1338-23-4	0.108	0.343	0.659	1.77	144	1 Hr	N/A
Methyl formate	107-31-3	14.3	55.5	112	431	6,385	24 Hr Avg	N/A
Methyl hydrazine	60-34-4	0.00101	0.00393	0.00793	0.0306	0.452	24 Hr Avg	N/A
Methyl iodide (Iodomethane)	74-88-4	0.624	2.42	4.89	18.8	279	24 Hr Avg	N/A
Methyl isoamyl ketone	110-12-3	12.5	48.7	98.3	379	5,605	24 Hr Avg	N/A
Methyl isobutyl carbinol	108-11-2	5.61	21.8	44	169	2,507	24 Hr Avg	N/A
Methyl isobutyl ketone (MIBK; Hexone)	108-10-1	11	42.7	86.2	332	4,916	24 Hr Avg	N/A
Methyl isocyanate	624-83-9	0.00251	0.00974	0.0196	0.0757	1.12	24 Hr Avg	N/A
Methyl methacrylate	80-62-6	124,381	511,000	1,216,667	4,288,112	700	Annual	N/A
		11	42.7	86.2	332	4,914	24 Hr Avg	N/A
alpha-Methyl styrene	98-83-9	13	50.4	102	392	5,800	24 Hr Avg	N/A
Methyl tert-butyl ether (MTBE)	1634-04-4	7.75	30.1	60.7	234	3,462	24 Hr Avg	N/A
		533,063	2,190,000	5,214,286	18,377,622	3,000	Annual	N/A
MIBK (Methyl isobutyl ketone; Hexone)	108-10-1	11	42.7	86.2	332	4,916	24 Hr Avg	N/A
Mirex	2385-85-5	0.348	1.43	3.41	12	N/A	Annual	BACT
Molybdenum, as Mo, metal and insoluble compounds	7439-98-7	0.537	2.09	4.21	16.2	240	24 Hr Avg	N/A
Molybdenum, as Mo, soluble compounds	7439-98-7	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Monochlorobenzene (chlorobenzene)	108-90-7	2.47	9.61	19.4	74.7	1,105	24 Hr Avg	N/A
Morpholine	110-91-8	3.83	14.9	30	116	1,710	24 Hr Avg	N/A
MTBE (Methyl tert-butyl ether)	1634-04-4	533,063	2,190,000	5,214,286	18,377,622	3,000	Annual	N/A
		7.75	30.1	60.7	234	3,462	24 Hr Avg	N/A
Muriatic acid (Hydrogen chloride; Hydrochloric acid)	7647-01-0	3,554	14,600	34,762	122,517	20	Annual	N/A
		0.557	1.77	3.41	9.15	746	1 Hr	N/A
Mustard gas	505-60-2	2.43	10	23.8	83.9	N/A	Annual	LAER
Naphthalene	91-20-3	2.82	10.9	22.1	85	1,258	24 Hr Avg	N/A
2-Naphthylamine	91-59-8	2.43	10	23.8	83.9	N/A	Annual	LAER
Nickel and compounds, as Ni	7440-02-0	6.83	28.1	66.8	236	N/A	Annual	BACT
Nickel carbonyl, as Ni	13463-39-3	6.83	28.1	66.8	236	N/A	Annual	BACT
		0.0188	0.0729	0.147	0.566	8.38	24 Hr Avg	N/A
Nickel subsulfide, as Ni	12035-72-2	3.7	15.2	36.2	128	N/A	Annual	LAER
Nitric acid	7697-37-2	0.277	1.08	2.17	8.36	124	24 Hr Avg	N/A
Nitrilotriacetic acid	139-13-9	1,185	4,867	11,587	40,839	N/A	Annual	BACT
p-Nitroaniline	100-01-6	0.161	0.626	1.26	4.86	72	24 Hr Avg	N/A
Nitrobenzene	98-95-3	0.27	1.05	2.12	8.17	121	24 Hr Avg	N/A
p-Nitrochlorobenzene	100-00-5	0.0346	0.134	0.271	1.05	15.5	24 Hr Avg	N/A
Nitroethane	79-24-3	16.5	64.1	129	498	7,369	24 Hr Avg	N/A
Nitrogen mustards (2,2'-Dichloro-N-methyldiethylamine)	51-75-2	2.43	10	23.8	83.9	N/A	Annual	BACT
Nitromethane	75-52-5	2.68	10.4	21	81	1,198	24 Hr Avg	N/A
1-Nitropropane	108-03-2	4.89	19	38.4	148	2,186	24 Hr Avg	N/A
2-Nitropropane	79-46-9	2.43	10	23.8	83.9	N/A	Annual	BACT

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(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
		1.96	7.6	15.3	59.1	875	24 Hr Avg	N/A
1-Nitropyrene	5522-43-0	16.2	66.4	158	557	N/A	Annual	BACT
N-Nitrosodi-n-butylamine	924-16-3	1.11	4.56	10.9	38.3	N/A	Annual	BACT
N-Nitrosodiethanolamine	1116-54-7	2.22	9.13	21.7	76.6	N/A	Annual	BACT
N-Nitrosodiethylamine	55-18-5	0.0413	0.17	0.404	1.42	N/A	Annual	BACT
N-Nitrosodimethylamine	62-75-9	0.127	0.521	1.24	4.38	N/A	Annual	BACT
N-Nitrosodi-n-propylamine	621-64-7	0.888	3.65	8.69	30.6	N/A	Annual	BACT
N-Nitroso-N-ethylurea	759-73-9	0.231	0.948	2.26	7.96	N/A	Annual	BACT
N-Nitroso-N-methylurea	684-93-5	0.0523	0.215	0.511	1.8	N/A	Annual	BACT
N-Nitrosomethylvinylamine	4549-40-0	2.43	10	23.8	83.9	N/A	Annual	BACT
N-Nitrosomorpholine	59-89-2	0.935	3.84	9.15	32.2	N/A	Annual	BACT
N'-Nitrosonornicotine	16543-55-8	2.43	10	23.8	83.9	N/A	Annual	BACT
N-Nitrosopiperidine	100-75-4	0.658	2.7	6.44	22.7	N/A	Annual	BACT
N-Nitrosopyrrolidine	930-55-2	2.91	12	28.5	100	N/A	Annual	BACT
N-Nitrososarcosine	13256-22-9	2.43	10	23.8	83.9	N/A	Annual	BACT
Nitrotoluene (mixtures and isomers)	88-72-2	0.603	2.34	4.72	18.2	269	24 Hr Avg	N/A
Nitrous oxide	10024-97-2	4.84	18.8	37.9	146	2,160	24 Hr Avg	N/A
Octachloronaphthalene	2234-13-1	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Oxalic acid	144-62-7	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
P,p'-Oxybis(benzenesulfonyl hydrazide)	80-51-3	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Pentachloronaphthalene	1321-64-8	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Pentachloronitrobenzene (Quintobenzene; PCNB)	82-68-8	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Pentachlorophenol (PCP)	87-86-5	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Pentyl Acetate (mixtures and isomers)	628-63-7	14.3	55.6	112	432	6,390	24 Hr Avg	N/A
Perchloroethylene (Tetrachloroethylene)	127-18-4	301	1,237	2,946	10,383	N/A	Annual	BACT
		9.11	35.4	71.4	275	4,069	24 Hr Avg	N/A
Perchloromethyl mercaptan	594-42-3	0.0408	0.159	0.32	1.23	18.2	24 Hr Avg	N/A
Perfluoroisobutylene	382-21-8	0.00611	0.0195	0.0374	0.1	8.18	1 Hr	N/A
Persulfates (Ammonium, Potassium, Sodium)	7727-54-0	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
PGME (Propylene glycol monomethyl ether)	107-98-2	355,375	1,460,000	3,476,190	12,251,748	2,000	Annual	N/A
Phenol	108-95-2	1.03	4.02	8.1	31.2	462	24 Hr Avg	N/A
Phenolphthalein	77-09-8	2.43	10	23.8	83.9	N/A	Annual	BACT
Phenylenediamine (mixtures and isomers)	106-50-3	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Phenyl ether vapor	101-84-8	0.374	1.45	2.93	11.3	167	24 Hr Avg	N/A
Phenyl glycidyl ether (PGE)	122-60-1	0.033	0.128	0.259	0.996	14.7	24 Hr Avg	N/A
Phenylhydrazine	100-63-0	0.0238	0.0923	0.186	0.717	10.6	24 Hr Avg	N/A
Phenyl mercaptan	108-98-5	0.121	0.47	0.949	3.65	54.1	24 Hr Avg	N/A
Phosgene	75-44-5	0.0217	0.0844	0.17	0.656	9.71	24 Hr Avg	N/A
Phosphine	7803-51-2	0.0224	0.0871	0.176	0.677	10	24 Hr Avg	N/A
Phosphoric acid	7664-38-2	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
		1,777	7,300	17,381	61,259	10	Annual	N/A
Phosphorus (yellow)	7723-14-0	0.00544	0.0212	0.0427	0.164	2.43	24 Hr Avg	N/A
Phosphorus oxychloride	10025-87-3	0.0337	0.131	0.264	1.02	15.1	24 Hr Avg	N/A

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Phosphorus pentachloride	10026-13-8	0.0457	0.178	0.359	1.38	20.4	24 Hr Avg	N/A
Phosphorus pentasulfide	1314-80-3	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
Phosphorus trichloride	7719-12-2	0.0604	0.234	0.473	1.82	27	24 Hr Avg	N/A
Phthalic anhydride	85-44-9	0.325	1.26	2.55	9.82	145	24 Hr Avg	N/A
Picric acid	88-89-1	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Platinum (metal)	7440-06-4	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
Platinum, soluble salts, as Pt	7440-06-4	0.000107	0.000417	0.000842	0.00324	0.048	24 Hr Avg	N/A
Polybrominated biphenyls (PBBs; Bromodiphenyls)	59536-65-1	0.207	0.849	2.02	7.12	N/A	Annual	BACT
Polychlorinated biphenyls (PCBs; Chlorodiphenyls; Arochlor)	1336-36-3	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
		0.1	0.1	0.1	0.1	N/A	Annual	BACT
Potassium hydroxide	1310-58-3	0.149	0.476	0.914	2.45	200	1 Hr	N/A
1,3-Propane sultone	1120-71-4	2.58	10.6	25.2	88.8	N/A	Annual	BACT
Propargyl alcohol	107-19-7	0.123	0.479	0.965	3.72	55	24 Hr Avg	N/A
beta-Propiolactone	57-57-8	0.444	1.83	4.35	15.3	N/A	Annual	BACT
		0.0792	0.308	0.62	2.39	35.4	24 Hr Avg	N/A
Propionic acid	79-09-4	1.63	6.32	12.8	49.1	727	24 Hr Avg	N/A
Propylene dichloride (1,2-Dichloropropane)	78-87-5	711	2,920	6,952	24,503	4	Annual	N/A
		18.6	72.3	146	562	8,318	24 Hr Avg	N/A
Propylene glycol monomethyl ether (PGME)	107-98-2	355,375	1,460,000	3,476,190	12,251,748	2,000	Annual	N/A
Propylene oxide	75-56-9	5,331	21,900	52,143	183,776	30	Annual	N/A
		2.55	9.91	20	77	1,140	24 Hr Avg	N/A
		480	1,973	4,698	16,556	N/A	Annual	BACT
Propylenimine (2-Methyl aziridine; Propylene imine)	75-55-8	0.251	0.975	1.97	7.57	112	24 Hr Avg	N/A
		2.43	10	23.8	83.9	N/A	Annual	BACT
Pyridine	110-86-1	0.77	2.99	6.04	23.2	344	24 Hr Avg	N/A
Pyrocatechol (Catechol)	120-80-9	1.21	4.7	9.48	36.5	540	24 Hr Avg	N/A
Quintobenzene (Pentachloronitrobenzene)	82-68-8	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Resorcinol	108-46-3	2.42	9.4	19	73	1,081	24 Hr Avg	N/A
Rhodium (metal) and insoluble compounds, as Rh	7440-16-6	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
Rhodium, soluble compounds, as Rh	7440-16-6	0.000537	0.00209	0.00421	0.0162	0.24	24 Hr Avg	N/A
Safrole	94-59-7	28.2	116	276	972	N/A	Annual	BACT
Selenium and compounds, as Se	7782-49-2	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
Silicon tetrahydride (Silane)	7803-62-5	0.353	1.37	2.77	10.7	158	24 Hr Avg	N/A
Sodium Azide, as sodium azide or hydrazoic acid vapor	26628-22-8	0.0218	0.0696	0.134	0.359	29.3	1 Hr	N/A
Sodium bisulfite	7631-90-5	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Sodium hydroxide	1310-73-2	0.149	0.476	0.914	2.45	200	1 Hr	N/A
Sodium metabisulfite	7681-57-4	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Stoddard solvent (Mineral spirits)	8052-41-3	30.8	119	241	929	13,742	24 Hr Avg	N/A
Strong inorganic acid mists containing sulfuric acid (>35% by weight)	7664-93-9	2.43	10	23.8	83.9	N/A	Annual	BACT
Styrene, monomer	100-42-5	4.58	17.8	35.9	138	2,045	24 Hr Avg	N/A
		177,688	730,000	1,738,095	6,125,874	1,000	Annual	N/A
Sulfometuron methyl	74222-97-2	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A

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Sulfur monochloride	10025-67-9	0.412	1.31	2.53	6.78	552	1 Hr	N/A
Sulfur tetrafluoride	7783-60-0	0.033	0.105	0.202	0.542	44.2	1 Hr	N/A
Sulfuric acid	7664-93-9	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
Sulprofos	35400-43-2	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
Talc, containing no asbestos fibers	14807-96-6	0.107	0.417	0.842	3.24	48	24 Hr Avg	N/A
Tantalum, metal and oxide dusts, as Ta	7440-25-7	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
TCDD (2,3,7,8-Tetrachlorodibenzo-p-dioxin), as equivalents	1746-01-6	0.0001	0.0001	0.0001	0.0001	N/A	Annual	LAER
Tellurium and compounds, except hydrogen telluride, as Te	13494-80-9	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Terphenyls	26140-60-3	0.373	1.19	2.29	6.13	500	1 Hr	N/A
2,3,7,8-Tetrachlorodibenzo-p-dioxin (Dioxin; 2,3,7,8-TCDD), as dioxin equivalents	1746-01-6	0.0001	0.0001	0.0001	0.0001	N/A	Annual	LAER
1,1,2,2-Tetrachloroethane	79-34-5	0.369	1.43	2.89	11.1	165	24 Hr Avg	N/A
Tetrachloroethylene (Perchloroethylene)	127-18-4	9.11	35.4	71.4	275	4,069	24 Hr Avg	N/A
		301	1,237	2,946	10,383	N/A	Annual	BACT
Tetrachloronaphthalene	1335-88-2	0.107	0.417	0.842	3.24	48	24 Hr Avg	N/A
1,1,1,2-Tetrafluoroethane	811-97-2	14,215,010	58,400,000	139,047,619	490,069,930	80,000	Annual	N/A
Tetrafluoroethylene	116-14-3	0.44	1.71	3.45	13.3	197	24 Hr Avg	N/A
		2.43	10	23.8	83.9	N/A	Annual	BACT
Tetrahydrofuran	109-99-9	31.7	123	248	956	14,155	24 Hr Avg	N/A
Tetranitromethane	509-14-8	0.00215	0.00837	0.0169	0.065	0.962	24 Hr Avg	N/A
		2.43	10	23.8	83.9	N/A	Annual	BACT
Thallium, elemental and soluble compounds, as Tl	7440-28-0	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Thionyl chloride	7719-09-7	0.363	1.16	2.23	5.97	487	1 Hr	N/A
Thiourea	62-56-6	84.6	348	828	2,917	N/A	Annual	BACT
Tin organic compounds, as Sn	7440-31-5	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Tin, metal, oxides and inorganic compounds, except tin hydride, as Sn	7440-31-5	0.107	0.417	0.842	3.24	48	24 Hr Avg	N/A
o-Tolidine (3,3'-Dimethylbenzidine)	119-93-7	2.43	10	23.8	83.9	N/A	Annual	BACT
Toluene (Toluol)	108-88-3	71,075	292,000	695,238	2,450,350	400	Annual	N/A
		10.1	39.3	79.3	306	4,522	24 Hr Avg	N/A
2,4-/2,6-Toluene diisocyanate (mixtures and isomers) (TDI)	584-84-9	162	664	1,580	5,569	N/A	Annual	BACT
		0.00191	0.00743	0.015	0.0578	0.855	24 Hr Avg	N/A
		12.4	51.1	122	429	0.07	Annual	N/A
Toluene-2,4-diamine (2,4-Diaminotoluene)	95-80-7	1.62	6.64	15.8	55.7	N/A	Annual	BACT
m- and p-Toluidine	108-44-1	0.471	1.83	3.69	14.2	210	24 Hr Avg	N/A
o-Toluidine and o-toluidine hydrochloride and mixed isomers	95-53-4	34.8	143	341	1,201	N/A	Annual	BACT
		0.471	1.83	3.69	14.2	210	24 Hr Avg	N/A
Toluol (Toluene)	108-88-3	71,075	292,000	695,238	2,450,350	400	Annual	N/A
		10.1	39.3	79.3	306	4,522	24 Hr Avg	N/A
Tributyl phosphate	126-73-8	0.117	0.455	0.917	3.53	52.3	24 Hr Avg	N/A
1,2,4-Trichlorobenzene	120-82-1	2.77	8.82	17	45.5	3,711	1 Hr	N/A
1,1,2-Trichloroethane	79-00-5	2.93	11.4	23	88.5	1,310	24 Hr Avg	N/A
Trichloroethylene (Trichloroethene)	79-01-6	888	3,650	8,690	30,629	N/A	Annual	BACT

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		14.4	56.1	113	436	6,449	24 Hr Avg	N/A
Trichloronaphthalene	1321-65-9	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
2,4,6-Trichlorophenol	88-06-2	573	2,355	5,607	19,761	N/A	Annual	BACT
1,2,3-Trichloropropane	96-18-4	2.43	10	23.8	83.9	N/A	Annual	BACT
		3.24	12.6	25.4	97.8	1,447	24 Hr Avg	N/A
Triethanolamine	102-71-6	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Triethylamine	121-44-8	0.222	0.864	1.74	6.71	99.3	24 Hr Avg	N/A
1,3,5-Triglycidyl-s-triazinetrione	2451-62-9	0.00269	0.0104	0.0211	0.0811	1.2	24 Hr Avg	N/A
Trimellitic anhydride	552-30-7	0.00299	0.00951	0.0183	0.0491	4	1 Hr	N/A
Trimethyl benzene (mixtures and isomers)	25551-13-7	6.6	25.6	51.7	199	2,949	24 Hr Avg	N/A
Trimethylamine	75-50-3	0.649	2.52	5.09	19.6	290	24 Hr Avg	N/A
2,4,6-Trinitrotoluene (TNT)	118-96-7	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Triorthocresyl phosphate	78-30-8	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Triphenyl phosphate	115-86-6	0.161	0.626	1.26	4.86	72	24 Hr Avg	N/A
Tris(2,3-dibromopropyl phosphate)	126-72-7	2.69	11.1	26.3	92.8	N/A	Annual	BACT
Tungsten, as W, metal and insoluble compounds	7440-33-7	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Tungsten, as W, soluble compounds	7440-33-7	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
Uranium (natural), soluble and insoluble compounds, as U	7440-61-1	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
Urethane (Ethyl carbamate)	51-79-6	6.13	25.2	59.9	211	N/A	Annual	BACT
n-Valeraldehyde	110-62-3	9.46	36.8	74.2	286	4,227	24 Hr Avg	N/A
Vanadium pentoxide, as V2O5, respirable dust and fume	1314-62-1	0.00269	0.0104	0.0211	0.0811	1.2	24 Hr Avg	N/A
Vinyl acetate	108-05-4	35,538	146,000	347,619	1,225,175	200	Annual	N/A
		1.89	7.35	14.8	57.1	845	24 Hr Avg	N/A
Vinyl bromide	593-60-2	0.117	0.456	0.921	3.55	52.5	24 Hr Avg	N/A
Vinyl chloride	75-01-4	17,769	73,000	173,810	612,587	100	Annual	N/A
		202	830	1,975	6,961	N/A	Annual	LAER
Vinyl cyclohexene dioxide (4-vinyl-1-cyclohexene diepoxide)	106-87-6	2.43	10	23.8	83.9	N/A	Annual	BACT
		0.0308	0.12	0.241	0.93	13.8	24 Hr Avg	N/A
4-Vinyl cyclohexene	100-40-3	0.0238	0.0923	0.186	0.717	10.6	24 Hr Avg	N/A
Vinyl fluoride	75-02-5	0.101	0.393	0.793	3.05	45.2	24 Hr Avg	N/A
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4	1.06	4.14	8.35	32.2	476	24 Hr Avg	N/A
Vinyl toluene	25013-15-4	13	50.4	102	392	5,800	24 Hr Avg	N/A
Xylene (mixtures and isomers) (Xylol; Dimethyl Benzene)	1330-20-7	23.3	90.6	183	704	10,421	24 Hr Avg	N/A
m-Xylene-alpha,alpha'-diamine	1477-55-0	0.00747	0.0238	0.0457	0.123	10	1 Hr	N/A
Xylidine (mixtures and isomers)	1300-73-8	0.133	0.517	1.04	4.02	59.5	24 Hr Avg	N/A
Yttrium metal and compounds, as Y	7440-65-5	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
Zeolites (Erionite)	66733-21-9	2.43	10	23.8	83.9	N/A	Annual	LAER
Zirconium and compounds, as Zr	7440-67-7	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A

Note: The emission rates in columns (c) to (f) in Table A for any hazardous air contaminant may only be used if emissions are from an unobstructed vertical discharge point. Owners and operators of sources unable to use this table should refer to s. NR 445.08(2).

[1]For purposes of calculating non-exempt, potential to emit emissions for comparison with the threshold value in column (c), (d), (e) or (f) in the table the owner or operator of a source would:
-combine non-exempt, potential to emit emissions for each contaminant for all stacks within each of the 4 stack categories,
-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
-if any group exceeds it's respective threshold in column (c), (d), (e) or (f), consider all non-exempt, potential to emit emissions from the source in determining compliance with the applicable standard or control requirement

Table B
Emission Thresholds, Standards and Control Requirements for Manufacture or Treatment of Pesticides, Rodenticides, Insecticides, Herbicides or Fungicides

Hazardous Air Contaminant	CAS Number	Thresholds for Emission Points[1] (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
		Emissions from Stacks <25 ft	Emissions from Stacks 25 to <40 ft	Emissions from Stacks 40 to <75 ft	Emissions from Stacks ≥75 ft			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Aldrin	309-00-2	0.0134	0.0522	0.105	0.405	6	24 Hr Avg	N/A
Amitrole	61-82-5	6.58	27	64.4	227	N/A	Annual	BACT
		0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
Antimony hydride (Stibine)	7803-52-3	0.0274	0.107	0.215	0.828	12.2	24 Hr Avg	N/A
ANTU	86-88-4	0.0161	0.0626	0.126	0.486	7.2	24 Hr Avg	N/A
Atrazine	1912-24-9	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Azinphos-methyl	86-50-0	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
Baygon (Propoxur)	114-26-1	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Benomyl	17804-35-2	0.537	2.09	4.21	16.2	240	24 Hr Avg	N/A
Bromacil	314-40-9	0.537	2.09	4.21	16.2	240	24 Hr Avg	N/A
Bromomethane (Methyl bromide)	74-83-9	888	3,650	8,690	30,629	5	Annual	N/A
		0.209	0.81	1.64	6.3	93.2	24 Hr Avg	N/A
Captafol	2425-06-1	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Captan	133-06-2	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Carbaryl	63-25-2	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Carbofuran	1563-66-2	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Chlordane	57-74-9	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Chlorinated camphene (Toxaphene)	8001-35-2	5.55	22.8	54.3	191	N/A	Annual	BACT
		0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
1-Chloro-1-nitropropane	600-25-9	0.543	2.11	4.25	16.4	243	24 Hr Avg	N/A
Chloropicrin (Trichloronitromethane)	76-06-2	0.0361	0.14	0.283	1.09	16.1	24 Hr Avg	N/A
Chlorpyrifos	2921-88-2	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
Crufomate	299-86-5	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Cyhexatin	13121-70-5	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Demeton	8065-48-3	0.00568	0.0221	0.0445	0.171	2.54	24 Hr Avg	N/A
Diazinon	333-41-5	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
1,3-Dichloropropene	542-75-6	444	1,825	4,345	15,315	N/A	Annual	BACT
		0.244	0.947	1.91	7.36	109	24 Hr Avg	N/A
		3,554	14,600	34,762	122,517	20	Annual	N/A
2,2-Dichloropropionic acid	75-99-0	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Dichlorvos	62-73-7	88.8	365	869	3,063	0.5	Annual	N/A
		0.0483	0.188	0.379	1.46	21.6	24 Hr Avg	N/A
Dicrotophos	141-66-2	0.0134	0.0522	0.105	0.405	6	24 Hr Avg	N/A
Dieldrin	60-57-1	0.0134	0.0522	0.105	0.405	6	24 Hr Avg	N/A
Dinitro-o-cresol (4,6-Dinitro-o-cresol)	534-52-1	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A

Hazardous Air Contaminant	CAS Number	Thresholds for Emission Points[1] (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
		Emissions from Stacks <25 ft	Emissions from Stacks 25 to <40 ft	Emissions from Stacks 40 to <75 ft	Emissions from Stacks ≥75 ft			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Dioxathion	78-34-2	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
Diquat, respirable dust (various compounds) (Diquat dibromide)	2764-72-9	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Diquat, total dust (various compounds) (Diquat dibromide)	2764-72-9	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Disulfoton	298-04-4	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Endosulfan	115-29-7	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Endrin	72-20-8	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
EPN	2104-64-5	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Ethion	563-12-2	0.0215	0.0835	0.168	0.649	9.6	24 Hr Avg	N/A
Fensulfothion	115-90-2	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Fenthion	55-38-9	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
Fonofos	944-22-9	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Heptachlor and heptachlor epoxide	76-44-8	0.00269	0.0104	0.0211	0.0811	1.2	24 Hr Avg	N/A
Hexachlorobutadiene	87-68-3	0.0115	0.0445	0.0898	0.346	5.12	24 Hr Avg	N/A
Hexachlorocyclohexane and isomers (Lindane and isomers)	58-89-9	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
		5.73	23.5	56.1	198	N/A	Annual	BACT
Hexachlorocyclopentadiene	77-47-4	0.00599	0.0233	0.047	0.181	2.68	24 Hr Avg	N/A
Lindane and other hexachlorocyclohexane isomers	58-89-9	5.73	23.5	56.1	198	N/A	Annual	BACT
		0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Methomyl	16752-77-5	0.134	0.522	1.05	4.05	60	24 Hr Avg	N/A
Methyl bromide (Bromomethane)	74-83-9	888	3,650	8,690	30,629	5	Annual	N/A
		0.209	0.81	1.64	6.3	93.2	24 Hr Avg	N/A
Methyl demeton	8022-00-2	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Methyl parathion	298-00-0	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
Metribuzin	21087-64-9	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Mevinphos (Phosdrin)	7786-34-7	0.00483	0.0188	0.0379	0.146	2.16	24 Hr Avg	N/A
Monocrotophos	6923-22-4	0.0134	0.0522	0.105	0.405	6	24 Hr Avg	N/A
Naled	300-76-5	0.161	0.626	1.26	4.86	72	24 Hr Avg	N/A
Paraquat (respirable sizes) (Paraquat chloride)	1910-42-5	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Parathion	56-38-2	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Phenothiazine	92-84-2	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Phorate	298-02-2	0.00269	0.0104	0.0211	0.0811	1.2	24 Hr Avg	N/A
Pindone	83-26-1	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A
Propoxur (Baygon)	114-26-1	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Pyrethrum	8003-34-7	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Quinone	106-51-4	0.0237	0.0923	0.186	0.717	10.6	24 Hr Avg	N/A
Rotenone (commercial)	83-79-4	0.269	1.04	2.11	8.11	120	24 Hr Avg	N/A
Sodium fluoroacetate	62-74-8	0.00269	0.0104	0.0211	0.0811	1.2	24 Hr Avg	N/A
Stibine (Antimony hydride)	7803-52-3	0.0274	0.107	0.215	0.828	12.2	24 Hr Avg	N/A
Strychnine	57-24-9	0.00806	0.0313	0.0632	0.243	3.6	24 Hr Avg	N/A
Sulfotep (TEDP)	3689-24-5	0.0107	0.0417	0.0842	0.324	4.8	24 Hr Avg	N/A
Sulfuryl fluoride	2699-79-8	1.12	4.36	8.79	33.8	501	24 Hr Avg	N/A

Hazardous Air Contaminant	CAS Number	Thresholds for Emission Points[1] (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
		Emissions from Stacks <25 ft	Emissions from Stacks 25 to <40 ft	Emissions from Stacks 40 to <75 ft	Emissions from Stacks ≥75 ft			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
TEPP	107-49-3	0.00269	0.0104	0.0211	0.0811	1.2	24 Hr Avg	N/A
Thiram	137-26-8	0.0537	0.209	0.421	1.62	24	24 Hr Avg	N/A
Toxaphene (Chlorinated camphene)	8001-35-2	5.55	22.8	54.3	191	N/A	Annual	BACT
		0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Trichloronitromethane (Chloropicrin)	76-06-2	0.0361	0.14	0.283	1.09	16.1	24 Hr Avg	N/A
Warfarin	81-81-2	0.00537	0.0209	0.0421	0.162	2.4	24 Hr Avg	N/A

Note: The emission rates in columns (c) to (f) in Table B for any hazardous air contaminant may only be used if emissions are from an unobstructed vertical discharge point. Owners and operators of sources unable to use this table should refer to s. NR 445.08(2).

[1]For purposes of calculating non-exempt, potential to emit emissions for comparison with the threshold value in column (c), (d), (e) or (f) in the table the owner or operator of a source would:
-combine non-exempt, potential to emit emissions for each contaminant for all stacks within each of the 4 stack categories,
-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
-if any group exceeds it's respective threshold in column (c), (d), (e) or (f), consider all non-exempt, potential to emit emissions from the source in determining compliance with the applicable or control requirement

Table C
Emission Thresholds and Control Requirements for Manufacture or Treatment of Pharmaceuticals

Hazardous Air Contaminant	CAS Number	Thresholds for Emission Points[1] (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
		Emissions from Stacks <25 ft	Emissions from Stacks 25 to <40 ft	Emissions from Stacks 40 to <75 ft	Emissions from Stacks ≥75 ft			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Adriamycin	23214-92-8	2.43	10	23.8	83.9	N/A	Annual	BACT
Azathioprine	446-86-6	3.48	14.3	34.1	120	N/A	Annual	LAER
Bischloroethyl nitrosourea	154-93-8	2.43	10	23.8	83.9	N/A	Annual	BACT
N,N-Bis (2-chloroethyl)-2-naphthylamine (Chlornaphazine)	494-03-1	2.43	10	23.8	83.9	N/A	Annual	LAER
Bis(chloromethyl) ether (BCME) and technical grade	542-88-1	2.43	10	23.8	83.9	N/A	Annual	LAER
1,4-Butanediol dimethanesulphonate (Myleran; busulphan)	55-98-1	2.43	10	23.8	83.9	N/A	Annual	LAER
Chlorambucil	305-03-3	0.0137	0.0562	0.134	0.471	N/A	Annual	LAER
Chlornaphazine (N,N-Bis (2-chloroethyl)-2-naphthylamine)	494-03-1	2.43	10	23.8	83.9	N/A	Annual	LAER
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)	13010-47-4	2.43	10	23.8	83.9	N/A	Annual	BACT
Chloromethyl methyl ether (CMME)	107-30-2	2.43	10	23.8	83.9	N/A	Annual	LAER
Cyclophosphamide	50-18-0	10.5	42.9	102	360	N/A	Annual	LAER
Dacarbazine	4342-03-4	0.127	0.521	1.24	4.38	N/A	Annual	BACT
Diethylstilbestrol (DES)	56-53-1	0.0178	0.073	0.174	0.613	N/A	Annual	LAER
Estradiol (Oestradiol)	50-28-2	0.162	0.664	1.58	5.57	N/A	Annual	BACT
Iron dextran complex	9004-66-4	2.43	10	23.8	83.9	N/A	Annual	BACT
Melphalan	148-82-3	0.048	0.197	0.47	1.66	N/A	Annual	LAER
Mestranol	72-33-3	2.43	10	23.8	83.9	N/A	Annual	BACT
N-Methyl-N'-nitro-N-nitrosoguanidine (MNNG)	70-25-7	0.74	3.04	7.24	25.5	N/A	Annual	BACT
Myleran (1,4-Butanediol dimethanesulphonate; busulphan)	55-98-1	2.43	10	23.8	83.9	N/A	Annual	LAER
Oestradiol (Estradiol)	50-28-2	0.162	0.664	1.58	5.57	N/A	Annual	BACT
Phenazopyridine and phenazopyridine hydrochloride	136-40-3	36.3	149	355	1250	N/A	Annual	BACT
Phenytoin and sodium salt of phenytoin	57-41-0	2.43	10	23.8	83.9	N/A	Annual	BACT
Procarbazine and procarbazine hydrochloride	366-70-1	0.444	1.83	4.35	15.3	N/A	Annual	BACT
Propylthiouracil	51-52-5	6.13	25.2	59.9	211	N/A	Annual	BACT
Streptozotocin	18883-66-4	0.0573	0.235	0.561	1.98	N/A	Annual	BACT
Thiotepa (Tris(1-aziridinyl)phosphine sulfide)	52-24-4	0.523	2.15	5.11	18	N/A	Annual	LAER
Tris(1-aziridinyl)phosphine sulfide (Thiotepa)	52-24-4	0.523	2.15	5.11	18	N/A	Annual	LAER

Note: The emission rates in columns (c) to (f) in Table C for any hazardous air contaminant may only be used if emissions are from an unobstructed vertical discharge point. Owners and operators of sources unable to use this table should refer to s. NR 445.08(2).

[1]For purposes of calculating non-exempt, potential to emit emissions for comparison with the threshold value in column (c), (d), (e) or (f) in the table the owner or operator of a source would:
-combine non-exempt, potential to emit emissions for each contaminant for all stacks within each of the 4 stack categories,
-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
-if any group exceeds it's respective threshold in column (c), (d), (e) or (f), consider all non-exempt, potential to emit emissions from the source in determining compliance with the applicable standard or control requirement

NR 445.08 Compliance requirements. (1) COMPLIANCE DETERMINATION. Determination of compliance shall be done while the source is operating under the conditions required by permit or order resulting in the greatest emissions of the hazardous air contaminant, or absent a permit or order, by using the maximum theoretical emissions from the source.

(2) COMPLIANCE METHODS. The owner or operator of a source shall achieve compliance with the emission limitations and control requirements in s. NR 445.07(1), (2) or (3) for each hazardous air contaminant by doing one or any combination of the following. A source unable to meet the requirements of s. NR 445.07(6)(a) and (b) may not use par. (a) by itself or in combination with other methods to achieve compliance under this subsection.

(a) Limiting non-exempt, potential to emit emissions from the source of each hazardous air contaminant to less than the applicable threshold in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07.

(b) Limiting the quantity, concentration or duration of non-exempt, potential to emit emissions from the source of each hazardous air contaminant that has a standard expressed as an ambient air concentration in Table A or B of s. NR 445.07 so that the ambient air concentration off the source property is less than the concentration allowed under column (g) of the table.

(c) Limiting the quantity, concentration or duration of non-exempt, potential to emit emissions of each hazardous air contaminant with a control requirement in column (i) of Table A, B or C of s. NR 445.07 having a unit risk factor established by either the EPA or the California air resources board, so as not to cause an ambient air concentration off the source property that results in an inhalation impact greater than 1×10^{-6}. The inhalation impact is determined by the following equation:

inhalation impact = (inhalation impact concentration $_{\text{annual average}}$) x (unit risk factor)

where:

inhalation impact concentration $_{\text{annual average}}$ is the annual average concentration of a contaminant in micrograms per cubic meter ($\mu g/m^3$)

unit risk factor for the contaminant is the unit risk factor value established by either EPA or the California air resources board and is expressed in reciprocal micrograms per cubic meter $(\mu g/m^3)^{-1}$

(d) Altering the release height or dispersion characteristics of each hazardous air contaminant in Table A, B or C of s. NR 445.07 such that the alteration results in the source's ability to meet par. (a), (b) or (c) or sub. (3)(a)1. or (b)1.

(e) Limiting the concentration of each hazardous air contaminant that has a standard expressed as an ambient air concentration in Table A or B of s. NR 445.07 in the stack to less than the concentration allowed under column (g) of the table for that contaminant.

(f) Limiting emissions of the hazardous air contaminant through application of the control requirement identified in column (i) of Table A, B or C of s. NR 445.07. The control requirement shall be first applied to the emissions unit at the facility that emits the greatest actual annual amount of the hazardous air contaminant. If application of the control requirement to this emissions unit does not reduce facility emissions of the hazardous air contaminant to a level less than the rate listed in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07 for the contaminant, the control requirement shall be applied to other emissions units at the facility that emit progressively smaller amounts of the contaminant until emissions from the facility are below the emission rate listed in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07 for the contaminant or until the control requirement has been applied to all emissions units at the facility that emit at least 10% of the rate listed in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07 for the contaminant. If application of the control requirement to these emissions units does not result in the reduction of at least 50% of the potential emissions of the contaminant from the facility, the department may require application of the control requirement on a reasonable array of smaller emissions units that emit the contaminant.

Note: The term "control requirement" is used to represent the applicable level of emission reduction required for the hazardous air contaminant under review, in other words LAER or BACT. These reduction options include lower emitting processes or practices, material substitution, add-on controls, or any combination of the options.

(3) ALTERNATIVE METHODS OF COMPLIANCE. (a) The owner or operator of a source may use the following alternative method of complying with any control requirements in s. NR 445.07(1)(c), (2) or (3) by doing both of the following:

1. Limiting the quantity, concentration or duration of potential to emit emissions of one or more hazardous hazardous air contaminants with a control requirement in column (i) of Table A, B or C of s. NR 445.07 having a unit risk factor established by either the EPA or the California air resources board so as not to cause an ambient air concentration off the source property that results in a cumulative inhalation impact from all of the contaminants greater than 1×10^{-5}. The cumulative inhalation impact is determined by the following equation:

$$\text{cumulative inhalation impact} = \sum_{i=1}^{n} (\text{inhalation impact}_{\text{annual average}})_i \times (\text{unit risk factor})_i$$

where:

inhalation impact $_{\text{annual average}}$ is the annual average concentration in micrograms per cubic meter ($\mu g/m^3$) of each contaminant

unit risk factor for the contaminant is the unit risk factor value established by either EPA or the California air resources board and is expressed in reciprocal micrograms per cubic meter $(\mu g/m^3)^{-1}$

i is a subscript denoting an individual hazardous air contaminant

n is the number of different hazardous air contaminants with a control requirement in column (i) of Table A, B or C of s. NR 445.07 having a unit risk factor established by either the EPA or the California air resources board, including those exempt under s. NR 445.07(5), that are emitted at the facility.

2. For each hazardous air contaminant with a control requirement in column (i) of Table A, B or C of s. NR 445.07 not having a unit risk factor established by either the EPA or the California air resources board, limiting potential to emit emissions of the contaminant from the facility, including those exempt under s. NR 445.07(5), to less than the relevant threshold in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07.

(b) The owner or operator of a source may use the following alternative method of complying with any control requirements in s. NR 445.07(4) by doing both of the following:

1. Limiting the quantity, concentration or duration of potential to emit emissions of one or more hazardous air contaminants with a control requirement in column (i) of Table A, B or C of s. NR 445.07 having a unit risk factor established by either the EPA or the California air resources board, including those exempt under s. NR 445.07(5), so as not to cause a cumulative multipathway impact off the source property from all of the contaminants greater than 1×10^{-5}.

2. For each hazardous air contaminant with a control requirement in column (i) of Table A, B or C of s. NR 445.07 not having a unit risk factor established by either the EPA or the California air resources board, limiting potential to emit emissions of the contaminant from the facility, including those exempt under s. NR 445.07(5), to less than the relevant threshold in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07.

Note: Unit risk factors for carcinogens can be obtained from the US EPA at the following website: http://www.epa.gov/iris. The US EPA unit risk factors should be consulted first. If no agreed upon unit risk factor is listed by the US EPA, then unit risk factors developed by the State of California should be consulted. The State of California's Air Resources Board and Office of Environmental and Health Hazard Assessment unit risk factors for carcinogens can be obtained from the following website: http://www.arb.ca.gov/toxics/healthval/heathval.htm.

(c) The owner or operator of a source of emissions of hazardous air contaminants associated with agricultural waste shall be deemed in compliance with all requirements, limitations and conditions in this chapter provided best management practices, as approved by the department, for the handling of agricultural waste are implemented at the source.

Note: NR 445 was not developed with the purpose of regulating emissions of hazardous air contaminants associated with agricultural waste or byproducts. The department believes that using best management practices is the preferred approach to regulate and control emissions from these type of sources. Accordingly, the department intends to participate in the development of best management practices to regulate and control emissions from such sources within 36 months of the effective date of this section…[revisor inserts date].

(4) ENFORCEABLE LIMITATIONS. Any limitation elected under this section shall be placed in a permit or general or special order.

(5) DETERMINATION OF HAZARDOUS AIR CONTAMINANT EMISSIONS AND CONCENTRATIONS. For the purpose of determining emissions and concentrations of hazardous air contaminants under this subchapter, the owner or operator of a source:

(a) 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 Table A, B or C of s. NR 445.07 and for each hazardous air contaminant with a standard expressed as an ambient air concentration in column (g) of Table A, B or C constitutes 1% (10,000 parts per million) or more of the material, or for each hazardous air contaminant with a standard expressed as a control requirement in column (i) of Table A, B or C constitutes 0.1% (1,000 parts per million) or more of the material. If an approved material safety data sheet for a material does not list a hazardous air contaminant in Table A, B or C of 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.

(b) May rely upon mass balance or other use, consumption and analytical methodologies for calculating potential or theoretical emissions. However, the department may require that a stack test be conducted to affirm the accuracy of emission estimations.

(c) Is not required to consider emissions resulting directly from naturally occurring constituents in windblown soil.

(d) May rely on information generated by either the EPA screening or refined dispersion model to demonstrate either of the following:

1. Concentrations of each hazardous air contaminant will not exceed the ambient standard in column (g) of Table A or B of s. NR 445.07.

2. The source meets the provisions of sub. (2)(c), (3)(a)1. or (b)1.

Note: Contact the Environmental Studies Section of the Bureau of Air Management, 608-266-7718 for additional information regarding procedures and protocols associated with US EPA screening and air dispersion models.

(6) COMPLIANCE DEADLINES, RECORDKEEPING AND REPORTING REQUIREMENTS. (a) Except as provided for agricultural waste in par. (d), the owner or operator of a source subject to an emission limitation or control requirement in s. NR 445.07 and constructed or last modified on or after the effective date of this section… [revisor inserts date] shall achieve compliance upon startup of the source.

(b) The owner or operator of a source constructed or last modified prior to the effective date of this section… [revisor inserts date] with non-exempt, potential to emit emissions of a hazardous air contaminant less than or equal to the applicable threshold in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07 shall maintain records in accordance with s. NR 439.04(1) and (2) starting no later than the last day of the thirty-sixth calendar month after the effective date of this section… [revisor inserts date].

(c) Except as provided for agricultural waste in par. (d), the owner or operator of a source constructed or last modified prior to the effective date of this section… [revisor inserts date] with non-exempt, potential to emit emissions of a hazardous air contaminant greater than the applicable threshold in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07 or subject to s. NR 445.07(4) shall do all of the following:

1. Submit information no later than the last day of the eighteenth calendar month after the effective date of this section… [revisor inserts date] in accordance with procedure in sub. (7)(a) adequate to describe how applicable control requirements in s. NR 445.07(1)(c), (2), (3) or (4) or 445.09(3) will be met.

2. Achieve compliance with applicable emission limitations and control requirements in accordance with s. NR 445.08(1) and (2) no later than the last day of the thirty-sixth calendar month after the effective date of this section… [revisor inserts date].

3. Submit the required information in accordance with sub. (7).

(d)1. The owner or operator of a source with emissions of hazardous air contaminants associated with agricultural waste and constructed or last modified on or after thirty-six calendar months after the effective date of this section… [revisor inserts date] shall achieve compliance with any applicable requirements in s. NR 445.07 in accordance with either s. NR 445.08(2) or (3)(c).for the agricultural waste upon startup of the source.

2. Emissions of hazardous air contaminants associated with agricultural waste from a source constructed or last modified prior to thirty-six calendar months after the effective date of this section… [revisor inserts date] are exempt from the requirements in this chapter until thirty-six calendar months after the effective date of this section… [revisor inserts date]. Subsequently, the owner or operator of the source shall do both of the following if non-exempt, potential to emit emissions of a hazardous air contaminant from agricultural waste are greater than an applicable threshold in column (c), (d), (e) or (f) of Table A of s. NR 445.07:

a. Achieve compliance with applicable requirements in s. NR 445.07 in accordance with either s. NR 445.08(2) or (3)(c) no later than the last day of the forty-eighth calendar month after the effective date of this section… [revisor inserts date].

b. Submit the required information in accordance with sub. (7)(b).

(7) COMPLIANCE DEMONSTRATION AND NOTIFICATION REQUIREMENTS. The owner or operator of any source required to achieve compliance in accordance with the schedule in sub. (6)(c) shall demonstrate compliance by doing the following as applicable:

(a) Submit the information required under sub. (6)(c)1. on the application form required for an operation permit, an amendment to an application, renewal of the operation permit, or for a significant revision under s. NR 407.13, as applicable.

(b) For all sources, submit all of the following information to the department:

1. The hazardous air contaminants in Table A, B and C of s. NR 445.07 the facility is capable of emitting in an amount greater than the threshold value listed for the contaminant in the applicable table.

2. The emission limitation applicable to each hazardous air contaminant identified under subd. 1.

3. The method or combination of methods used for achieving compliance under sub. (2) or (3) with the applicable standard for each hazardous air contaminant.

4. A description of the records that will be kept on site to verify continuous compliance for each hazardous air contaminant with its applicable standard.

5. A signed and dated statement by the responsible official stating that the information is accurate to the best of his or her knowledge and belief, and that all of the requirements of this subchapter have been met.

Note: Application forms for par. (a) may be obtained from, and submitted to, the regional offices and service centers of the department or:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707-7921

Attention: Operation Permits.

The address for submittal of information under par. (b) is:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707-7921

Attention: NR 445 Compliance Notifications.

(8) DEPARTMENT REVIEW. The department shall review information submitted to comply with sub. (6)(c)1. to determine whether to approve, conditionally approve or disapprove the source's method to meet applicable control requirements.

(9) EXTENSIONS TO COMPLIANCE SCHEDULE. The department may, at the request of the owner or operator of a source, grant an extension of any applicable compliance deadline in sub. (6)(b) or (c)1. or 2. or s. NR 445.09(4)(a) or (b) for a period not to exceed 180 calendar days.

(10) SUBSEQUENT REQUIREMENTS. (a) Notwithstanding the compliance deadline in sub. (6)(c)2., a source needing department approval under sub. (8) shall achieve final compliance with applicable control requirements by the later of the last day of the:

1. Thirty-sixth calendar month after the effective date of this section… [revisor inserts date].

2. Eighteenth calendar month after the department's approval under sub. (8).

(b) The owner or operator of a source that achieved compliance with requirements in subch. II by installing emission control equipment may not be required to install additional control equipment to achieve compliance with this subchapter for a period of 10 years after the installation of the control equipment or the useful life of the control equipment as determined by the department, whichever is less. For the purposes of this paragraph, increasing stack height, other dilution measures or material reformulation may not be construed as installation of emission control

equipment. Material reformulation that requires substantial capital expenditures for process equipment that was carried out with prior department approval and that results in a reduction of emissions of hazardous air contaminants that is sufficient to comply with the limitations of this chapter may be construed as installation of emission control equipment under this paragraph.

NR 445.09 Fuel, control and compliance requirements for compression ignition internal combustion engines combusting fuel oil. (1) APPLICABILITY. This section applies to any compression ignition internal combustion engine that is capable of combusting fuel oil, except for any of the following:

(a) An engine with rated brake power less than 100 horsepower.

(b) An engine used to provide an essential service.

(c) An engine used to power an emergency electric generator exempt under s. NR 406.04(1)(w) or 407.03(1)(u).

(d) An engine manufactured after the effective date of this section…. [revisor inserts date] installed to provide substitute power during maintenance or repair of a CI engine subject to sub. (3)(a), provided the substitute engine has a power rating equal to or less than the existing engine, operates less than 10 consecutive days per substitution and meets the fuel requirement in sub. (2).

(e) An engine that meets the fuel requirement in sub. (2) and is approved by US EPA to meet either of the following:

1. The Tier 2 particulate emission standard for nonroad engines as found in 40 CFR Parts 9, 86 and 89 for an engine that meets either of the following:

a. Is purchased prior to January 1, 2011 and rated at 175 horsepower or greater.

b. Is purchased prior to January 1, 2012 and rated from 100 to less than 175 horsepower.

2. A particulate emission standard of 0.01 grams per brake horsepower-hour for an engine that meets either of the following:

a. Is purchased on or after January 1, 2011 and rated at 175 horsepower or greater.

b. Is purchased on or after January 1, 2012 and rated from 100 to less than 175 horsepower.

(2) FUEL REQUIREMENTS. Beginning no later than July 15, 2006, the owner or operator of a CI engine shall only combust fuel oil with a sulfur content no greater than the sulfur content that is allowed for on-road use at the time the fuel was purchased, when firing the engine with fuel oil.

Note: Federal Diesel Fuel Programs and Regulations can be found at: http://www.epa.gov/otaq/regs/fuels/diesel/diesel.htm#regs. As of the effective date of this section… [revisor inserts date], federal requirements state that beginning July 15, 2006, the sulfur content of diesel fuel at the terminal level will be 15 ppm or less.

(3) CONTROL REQUIREMENTS. (a) The owner or operator of a CI engine that stays, or that is intended to stay, in a single location for any 12 consecutive month period, and that combusts or intends to combust 10,000 gallons or more of fuel oil during that period of time, shall do one of the following as appropriate:

1. For an engine manufactured or last rebuilt prior to January 1, 1995, install, operate and maintain a control device that achieves at least 85% overall control of particulate matter emissions or a certified control device that has an overall level of particulate matter emission control that is great enough to ensure that one of the following emission rates is achieved:

a. 0.10 grams per brake horsepower-hour for engines rated from 100 to 750 horsepower.

b. 0.03 grams per brake horsepower-hour engines rated at greater than 750 horsepower.

2. For an engine manufactured or last rebuilt on or after January 1, 1995 and prior to July 1, 2006, install, operate and maintain a certified control device that has an overall level of control that is great enough to ensure that the applicable emission rate in subd. 1.a. or b. is achieved.

3. For an engine manufactured or last rebuilt on or after July 1, 2006 and prior to July 1, 2010, either control particulate matter emissions to a level that is the best available control technology or install, operate and maintain a certified control device that has an overall level of particulate matter emission control that is great enough to ensure that an emission rate of 0.03 grams per brake horsepower-hour is achieved.

4. For an engine manufactured or last rebuilt on or after July 1, 2010, either control particulate matter emissions to a level that is the best available control technology or install, operate and maintain a certified control device that has an overall level of particulate matter emission control that is great enough to ensure that an emission rate of 0.01 grams per brake horsepower-hour is achieved.

Note: Upon request the department will provide information on the availability of control technology to meet the requirements in par. (a). Contact the Bureau of Air Management, 608-266-7718, for additional information.

(b) Paragraph (a) notwithstanding, the department may approve the use of an alternative or equivalent control method to any certified control device specified in par. (a)1., 2., 3. or 4.

(c) The owner or operator of a facility that conducts any testing involving the operation of an engine or group of engines subject to this section where the engine or engines combust, in the aggregate, 40,000 gallons or more of fuel oil in any 12 consecutive month period shall control particulate matter emissions from the facility from the engine or engines subject to this section to a level that is the best available control technology.

(4) COMPLIANCE DEMONSTRATION, NOTIFICATION REQUIREMENTS AND SCHEDULE. (a)1. Except as provided for in subd. 3., an owner or operator complying with an emission rate requirement in sub. (3)(a)1. or 2. shall achieve compliance and submit in writing to the department no later than the last day of the thirty-sixth calendar month after the effective date of this section… [revisor inserts date] all of the information in this subd. 1.a. to L. A copy of the information shall also be maintained at the location where the engine is operated.

a. Company name, contact name, phone number and address of the owner or operator of the engine.

b. The location of the engine.

c. The name of the engine manufacturer.

d. The make, model and serial number of the engine.

e. The date the engine was manufactured or last rebuilt.

f. The maximum rated horsepower of the engine.

g. The date the control device was first put into operation

h. The name of the control device manufacturer.

i. The product or model name of the control device.

j. The manufacturer's performance warranty for the control device expressed as a particulate matter emission rate in grams per brake horsepower-hour.

k. The test method used by the manufacturer to determine the particulate matter emission rate in the manufacturer's performance warranty for the control device.

L. The certifying agency for the control device.

2. Except as provided for in subd. 3., an owner or operator complying with the 85% control requirement in sub. (3)(a)1. shall achieve compliance and submit in writing to the department no later than the end of the last day of the thirty-sixth calendar month after the effective date of this section… [revisor inserts date] the information in subd.

1.a. to i. and the results of an emission test conducted to demonstrate compliance with the requirement. A copy of the test results shall also be maintained at the location where the engine is operated.

3. Subdivisions 1. or 2. notwithstanding, an owner or operator of an engine manufactured or last rebuilt prior to the effective date of this section… [revisor inserts date] may, in lieu of meeting the applicable control requirement in sub. (3)(a)1. or 2., operate the engine until January 1, 2011 without a particulate matter control device, provided they do all of the following:

a. Submits in writing to the department no later than the last day of the thirty-sixth calendar month after the effective date of this section… [revisor inserts date] a statement relaying their intent to cease operating the engine before January 1, 2011 and the information in subd. 1.a. to f.

b. Cease operation of the engine no later than December 31, 2010.

c. Submits in writing to the department no later than January 31, 2011 a confirmation that the engine ceased operating on or before December 31, 2010.

(b) An owner or operator complying with an emission rate requirement in sub. (3)(a)3. or 4. shall achieve compliance and submit all of the information in par. (a)1.a. to L. in writing to the department no later than 10 calendar days after startup. A copy of the information shall also be maintained at the location where the engine is operated.

(c) An owner or operator complying with the best available control technology requirement in sub. (3)(a)3. or 4., or a facility constructed or last modified after the effective date of this section… [revisor inserts date] subject to sub. (3)(c), shall submit information describing how the best available control technology requirement will be met in a permit application in accordance with s. NR 406.03. Compliance with the best available control technology requirement shall be achieved and demonstrated in accordance with the permit.

Note: Section NR 406.03 requires that owners or operators receive a construction permit prior to commencing operation of the source.

(d) The owner or operator of a facility constructed or last modified before the effective date of this section… [revisor inserts date] subject to sub. (3)(c) shall do both of the following:

1. Meet the schedule in s. NR 445.08(6)(c)1. and 2.

2. Submit information describing how the best available control technology requirement will be met on the application forms required for an operation permit, an amendment to an application, renewal of the operation permit, or for a significant revision under s. NR 407.13, as applicable.

(e) Any submission made under this subsection shall be signed by the responsible official designated by the owner or operator of source for this purpose, with a dated statement that the information submitted is accurate to the best of the responsible official's knowledge and belief and that all of the requirements of this section have been met.

Note: The address for submission of information to under pars. (a) and (b) is:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707

Attention: Compression Ignition Engine Notification.

Application forms for pars. (c) and (d) may be obtained from, and submitted to:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707

Attention: Construction Permit (or) Attention: Operation Permit (as appropriate).

(5) TEST METHODS AND PROCEDURES. (a) An owner or operator choosing to comply with the 85% control requirement of sub. (3)(a)1. shall, for each engine, comply with the requirements of ss. NR 439.06 and 439.07. The particulate matter emission reduction across a control device shall be determined by the following equation:

% reduction = 100 x (baseline emissions – controlled emissions)/(baseline emissions)

(b) Testing under par. (a) shall be conducted prior to the submission deadline in sub. (4)(a)2. Subsequent testing and notification shall be conducted whenever the particulate matter emission control device used to achieve the 85% emission reduction is replaced. The department shall be notified of the results of subsequent tests in writing no later than 60 calendar days after the completion of the test.

(6) RECORDKEEPING. In addition to meeting the recordkeeping requirements of s. NR 439.04(1) and (2), an owner or operator shall:

(a) Keep records of maintenance performed on any particulate matter emission control device used to comply with sub. (3).

(b) For any engine that stays or that is intended to stay in a single location for any 12 consecutive month period, keep the following records:

1. The amount of fuel oil combusted on a monthly basis for any engine not using a certified control device.

2. The power rating and days of operation of any CI engine used to substitute power under sub. (1)(d).

3. The cost of rebuilding any CI engine on a monthly basis.

NR 445.10 Control and compliance requirements for the handling and storage of coal. (1) APPLICABILITY. This section applies to the owner or operator of any stationary source that handles or stores 1,000 tons or more of coal in any 12 consecutive month period.

(2) REQUIREMENTS FOR OUTDOOR FUGITIVE COAL DUST EMISSIONS. No later than the last day of the thirty-sixth calendar month after the effective date of this section…[revisor inserts date], the owner or operator of a source that handles coal or maintains a coal storage pile shall achieve compliance with this section by doing all of the following:

(a) Having the ability to control, in a timely manner, outdoor fugitive coal dust emissions in an effort to prevent emissions off the source property.

Note: Examples of measures that would meet the ability to control requirement include active measures such as the application of water or chemical dust suppressants, passive measures such as the use of enclosed delivery or handling systems or solid fencing, or access to third-parties to provide dust suppression, as appropriate. The intent of this section is to allow facilities that suppress dust using water to manage the amount of water applied to avoid potential boiler, handling, or other operational problems, as long as there is sufficient dust control so as not to cause excessive outdoor fugitive coal dust emissions.

(b) Developing and implementing a plan to control outdoor fugitive coal dust emissions in an effort to prevent emissions off the source property. The plan shall include all of the following:

1. Identification of all sources of outdoor fugitive coal dust emissions from coal handling and coal storage piles on the source property.

2. A description of the measures that can be taken to control, in a timely manner, outdoor fugitive coal dust emissions from all sources identified under subd. 1. under the following conditions:

a. Routine operations.

b. Periods of high activity.

c. Periods of increased probability of outdoor fugitive dust emissions.

d. When equipment used to control outdoor fugitive coal dust emissions malfunctions.

Note: Suppliers of coal may want to consult with users in development of the plan to ensure that use of the controls provided for in par. (a) does not result in operational problems at a source combusting coal.

Examples of periods of high activity include periods when the daily handling of coal is much greater than usual, such as when unloading a large number of coal shipments at the close of the shipping season. Examples of periods of increased probability

of fugitive coal dust emissions include periods or a combination of periods of drought, freezing weather, or forecasts of high winds exceeding 25 miles per hour.

(c) Keeping records of actions taken to control outdoor fugitive coal dust emissions in accordance with s. NR 439.04(2).

(d) Keeping a copy of the plan and records of all actions taken at the facility for inspection upon request.

(3) REQUIREMENTS FOR NON-FUGITIVE COAL DUST EMISSIONS TO THE AMBIENT AIR. No later than the last day of the thirty-sixth calendar month after the effective date of this section …[revisor inserts date], the owner or operator subject to this section shall, for any non-fugitive source of coal dust emissions exhausted through a fabric filter to the ambient air, do one of the following:

(a) Limit visible emissions from each source to 10% opacity.

(b) Limit the quantity, concentration or duration of potential to emit emissions of respirable coal dust from all sources so that ambient air concentration off the source property is less than 21.6 $\mu g/m^3$ for any 24 hour averaging period. The owner or operator may rely on information generated by either the EPA screening or refined dispersion model to demonstrate meeting the concentration in this paragraph.

(4) COMPLIANCE CERTIFICATION. No later than the last day of the thirty-sixth calendar month after the effective date of this section …[revisor inserts date], the owner or operator of a source subject to this section shall certify the source's compliance status. An owner or operator of a source that has requirements at least as stringent as the requirements in sub. (2) or (3) in a permit or order may so state in his or her certification.

Note: This is a one-time certification. Certification forms may be obtained from, and submitted to:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707-7921

Attention: NR 445 Certification form for handling and storage of coal.

NR 445.11 Compliance requirements for sources of incidental emissions. (1) The owner or operator of a facility described by a standard industrial classification code listed in Table D, as described in the Standard Industrial Classification Manual, 1987, incorporated by reference in s. NR 484.05(1), or that has actual annual emissions of less than 5 tons of particulate matter and less than 3 tons of volatile organic compounds, shall meet the requirements of subs. (2) to (4) if any of the following apply:

(a) The facility includes operation of one or more of the following processes:

1. A compression ignition internal combustion engine with rated brake power greater than 100 horsepower used as a power source.

2. Any expected source of chlorinated dioxins, furans or PCBs.

3. Sludge incineration.

4. Chrome electroplating.

5. Gasoline dispensing.

6. Manufacture or treatment of a pesticide, rodenticide, insecticide, herbicide or a fungicide resulting in an emission of a hazardous air contaminant listed in Table B of s. NR 445.07.

7. Manufacture or treatment of a pharmaceutical resulting in an emission of a hazardous air contaminant listed in Table C of s. NR 445.07.

8. Solid, hazardous or medical waste incineration.

(b) The presence of one or more of the substances in Table E at the facility is indicated by one of the following:

1. The substance is listed on an approved material safety data sheet or is otherwise brought into the facility.

2. The substance is reasonably expected to be created at the facility through a combustion process or manufacturing process, or through the treatment of raw materials or waste.

(2)(a) The owner or operator of a process identified under sub. (1)(a)1. shall meet the applicable requirements in s. NR 445.09 for that process.

(b) The owner or operator of a process identified under sub. (1)(a)2. to 5. shall meet the applicable requirements in s. NR 445.07(1) for any hazardous air contaminants listed in Table A of s. NR 445.07 for that process.

Note: The department will develop a list of the hazardous air contaminants it has determined to be potentially emitted from the processes listed in sub. (1)(a)2. to 5. This list may be obtained by calling the Environmental Studies Section of the Bureau of Air Management at 608-266-7718.

(c) The owner or operator of a process identified under sub. (1)(a)6. shall meet the applicable requirements in s. NR 445.07(2) for any hazardous air contaminants listed in Table B of s. NR 445.07 for that process.

(d) The owner or operator of a process identified under sub. (1)(a)7. shall meet the applicable requirements in s. NR 445.07(3) for any hazardous air contaminants listed in Table C of s. NR 445.07 for that process.

(e) The owner or operator of a process identified under sub. (1)(a)8. shall meet the applicable requirements in s. NR 445.07(4) for that process.

(3) The owner or operator of a facility meeting the criteria in sub. (1)(b) shall meet the applicable requirements in s. NR 445.07(1) for any hazardous air contaminants listed in Table A of s. NR 445.07.

(4) The owner or operator subject to sub. (2) or (3) shall do both of the following:

(a) Achieve compliance using the procedures allowed under s. NR 445.08(2), (3)(a) or (b) or 445.09(4).

(b) Meet the applicable compliance schedule under s. NR 445.08(6).

Note: Owners and operators of sources affected by this section should refer to chs. NR 406, 407 and 438 to determine whether there are applicable requirements in those chapters for hazardous air contaminants identified under this section.

Table D
Standard Industrial Classifications for Sources of Incidental Emissions of Hazardous Air Contaminants

2-Digit SIC Code or Range	SIC Title
01-09	Agriculture, Forestry and Fishing
15	General Building Contractors
17	Special Trade Contractors
40-45, 47	Transportation
48	Communications
50-51	Wholesale Trade, except the following: Coal and Other Minerals and Ores (5052); Scrap and Waste Materials (5093); Chemicals and Allied Products (516); Petroleum and Petroleum Products (517)
52-59	Retail Trade
60-69	Finance, Insurance and Real Estate
70-89	Services, except the following: Laundry, Cleaning and Garment Services (721) ; Business Services, not elsewhere classified (7389); Automotive Repair Shops (753); Miscellaneous Repair Shops (769); General Medical and Surgical Hospitals (8062); Colleges, Universities and Professional Schools (822); Research, Development and Testing Services (873)

Note: Conversion tables to match 1987 SIC codes to 1997 NAICS codes can be found at http://www.census.gov/epcd/www/drnaics.htm.

Table E
Substances Of Concern for Sources of Incidental Emissions of Hazardous Air Contaminants

Substance	CAS Number
Acetaldehyde	75-07-0
Acrolein	107-02-8
Acrylamide	79-06-1
Acrylic acid	79-10-7
Acrylonitrile	107-13-1
Ammonia	7664-41-7
Arsenic, elemental and inorganic compounds, as As	7440-38-2
Arsine	7784-42-1
Benzene	71-43-2
Benzo(a)pyrene	50-32-8
Beryllium and beryllium compounds, as Be	7440-41-7
Bromine	7726-95-6
Bromine pentafluoride	7789-30-2
1,3-Butadiene	106-99-0
Cadmium and cadmium compounds, as Cd	7440-43-9
Carbon tetrachloride	56-23-5
Chlorine	7782-50-5
Chlorine dioxide	10049-04-4
Chlorine trifluoride	7790-91-2
Chloroform	67-66-3
Chromium (VI): Chromic acid mists and dissolved Cr (VI) aerosols, as Cr	7440-47-3
Chromium (VI): compounds and particulates	7440-47-3
Cobalt, elemental, and inorganic compounds, as Co	7440-48-4
Diborane	19287-45-7
1,2-Dibromoethane (Ethylene dibromide; EDB)	106-93-4
1,2-Dichloroethane (Ethylene dichloride; EDC)	107-06-2
Diglycidyl ether (DGE)	2238-07-5
Ethylene oxide	75-21-8
Fluorine	7782-41-4
Formaldehyde	50-00-0
Hexachlorobenzene (HCB)	118-74-1
Hexamethylene-1,6-diisocyanate (HDI)	822-06-0
Hydrazine and hydrazine sulfate	302-01-2
Hydrogen chloride (Hydrochloric acid; Muriatic acid)	7647-01-0
Hydrogen bromide	10035-10-6
Hydrogen cyanide	74-90-8
Hydrogen fluoride (Hydrofluoric acid)	7664-39-3
Hydrogen peroxide	7722-84-1
Hydrogen sulfide	7783-06-4
Indium	7440-74-6
Iodine	7553-56-2
Isophorone diisocyanate	4098-71-9
Lead Acetate, as Pb	301-04-2
Lead Phosphate, as Pb	7446-27-7
Maleic anhydride	108-31-6
Manganese, elemental and inorganic compounds, as Mn	7439-96-5
Mercury, as Hg, alkyl compounds	7439-97-6
Mercury, as Hg, aryl compounds	7439-97-6
Mercury, as Hg, inorganic forms including metallic mercury	7439-97-6

Substance	CAS Number
Methyl hydrazine	60-34-4
Methyl isocyanate	624-83-9
Methylene bisphenyl isocyanate (Methylene diphenyl isocyanate; MDI)	101-68-8
Methylene chloride (Dichloromethane)	75-09-2
Nickel and compounds, as Ni	7440-02-0
Nitric acid	7697-37-2
Octachloronaphthalene	2234-13-1
Oxalic acid	144-62-7
Pentachloronaphthalene	1321-64-8
Pentachlorophenol (PCP)	87-86-5
Perchloroethylene (Tetrachloroethylene)	127-18-4
Phenylenediamine (mixtures and isomers)	106-50-3
Phosphine	7803-51-2
Phosphoric acid	7664-38-2
Phosphorus (yellow)	7723-14-0
Phosphorus pentachloride	10026-13-8
Platinum, soluble salts, as Pt	7440-06-4
Propylene dichloride (1,2-Dichloropropane)	78-87-5
Rhodium, soluble compounds, as Rh	7440-16-6
Selenium and compounds, as Se	7782-49-2
Sulfuric acid	7664-93-9
Tellurium and compounds, except hydrogen telluride, as Te	13494-80-9
Tetrafluoroethylene	116-14-3
Thallium, elemental and soluble compounds, as Tl	7440-28-0
Tin organic compounds, as Sn	7440-31-5
2,4-/2,6-Toluene diisocyanate (mixtures and isomers) (TDI)	584-84-9
Trichloroethylene (Trichloroethene)	79-01-6
Trimellitic anhydride	552-30-7
Triorthocresyl phosphate	78-30-8
Tungsten, as W, soluble compounds	7440-33-7
Vinyl chloride	75-01-4
n-Xylene-alpha,alpha'-diamine	1477-55-0

NR 445.12 Variances. (1) CRITERIA FOR APPROVAL. The owner or operator of a source subject to this chapter may apply for and the department may approve a variance from any of the provisions identified in pars. (a) and (b) if the applicant demonstrates to the satisfaction of the department that applicable provisions are met as follows:

(a) An applicant for a variance from the LAER control requirements in s. NR 445.07(1)(c), (2), (3) or (4) shall demonstrate all of the following to the satisfaction of the department:

1. Compliance with the LAER control requirement for which the variance has been requested would be economically infeasible.

2. Residual emissions of the hazardous air contaminant in question would not cause significant harm to the

environment or public health.

3. The source's emissions would be controlled to a level that is the best available control technology.

(b) An applicant for a variance from the emission limitation of s. NR 445.07(1)(a) for a contaminant having an standard based on an annual time period shall demonstrate all of the following to the satisfaction of the department:

1. All direct or portable sources owned or operated in the state by the owner or operator of the air contaminant source for which a variance is requested are in, or are on a schedule for, compliance with all other applicable requirements of chs. NR 400 to 499.

2. The emission limitation from which variance is sought is technologically or economically infeasible to meet due to conditions or special circumstances at the source, including adverse environmental or energy impacts.

3. Residual emissions of the hazardous air contaminant in would not cause significant harm to public health.

4. Good faith efforts have been made to comply with s. NR 445.07(1)(a) and all reasonably available alternative operating procedures and interim control measures to minimize emissions of the hazardous air contaminant will be utilized during the duration of the variance.

(2) CONSULTATION. The department shall consult with the department of health and family services to determine that residual emissions would not cause significant harm under sub. (1)(a)2. or (b)3. prior to establishing an emission limitation in a permit or order under this section.

(3) APPLICATION FORMS. Application for a variance under this section shall be submitted on the application forms required for a construction permit, an operation permit, an amendment to an application, renewal of the operation permit, or for a significant revision under s. NR 407.13, as applicable.

Note: Application forms for sub. (3) may be obtained from, and submitted to, the regional and area offices of the department or:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707-7921

Attention: NR 445 Variance Applications.

(4) NOTICE AND HEARING. The department shall publish a notice of, and hold a public hearing on, any preliminary determination to approve a variance request under this section.

(5) ACTION ON APPLICATIONS. The department shall grant, conditionally grant or deny a variance request within 90 business days after the close of the public comment period on the request.

(6) REVIEW AND REVISION. The department shall review any variance granted under this section on a 5 year basis. Following its review and after notice and an opportunity for a public hearing and public comment, the department may modify, extend or rescind the variance.

NR 445.13 Review of hazardous air contaminant requirements. (1) PERIODIC REPORTS. The department, in consultation with the department of health and family services, shall prepare a periodic report for the natural resources board that reviews information related to listing, de-listing, and setting regulatory thresholds, standards and control requirements for hazardous air contaminants under this chapter. The report shall include all of the following:

(a) A review of available information about the likely sources of emissions of and an assessment of whether the criteria set forth in sub. (2)(b) are likely to apply to the hazardous air contaminants identified under this subsection.

(b) Recommendations on the need for rule modifications.

(c) Recommendations on the need for special studies.

(2) REVISION OF TABLE LISTS. (a) The department shall determine that a substance is a hazardous air contaminant that may be listed in Table A, B or C of s. NR 445.07 if the substance can, due to inhalation, cause an adverse health effect and it meets one or more of the following conditions:

1. The substance is classified as a known carcinogen or reasonably anticipated to be carcinogenic by both the International Agency for Research on Cancer and the National Toxicology Program.

2. The substance has a threshold limit value established by the American Conference of Governmental Industrial Hygienists.

3. The substance has a reference concentration established by the United States environmental protection agency with an uncertainty factor of 300 or less.

(b) Except as provided for in pars. (c) and (d), the department shall list in Table A, B or C of s. NR 445.07 a substance determined under par. (a) to be a hazardous air contaminant if it also determines that none of the following apply to the contaminant:

1. The only critical inhalation effect listed for the substance by the American Conference of Governmental Industrial Hygienists is asphyxiation.

2. The substance possesses an explosive nature requiring safety procedures that preclude ambient concentrations that would present toxicity concerns.

3. The substance has a threshold limit value of greater than or equal to 100 parts per million.

4. The substance has a threshold limit value of greater than or equal to 10 milligrams per cubic meter.

(c) Paragragh (b) notwithstanding, the department may consider any of the following in determining whether to list a hazardous air contaminant in Table A, B or C of s. NR 445.07:

1. Other regulations that may provide adequate protection for public health or welfare.

2. That additional information is necessary to fully assess the need to list the hazardous air contaminant in Table A, B or C.

(d) Paragraph (b) notwithstanding, the department shall consider all of the following in determining whether to list a hazardous air contaminant in Table A, B or C of s. NR 445.07:

1. An evaluation of sources in Wisconsin that release, or are likely to release, the contaminant.

2. An evaluation of the expected population exposure to the contaminant and the related risks.

3. An evaluation of alternative control strategies, including emission limitations, that includes consideration of costs.

(3) REEVALUATION OF LISTING DECISION. The owner or operator of an affected source or other interested party may submit a written request to, and the department may, reevaluate a determination to list or not to list a substance as a hazardous air contaminant in this chapter. The request shall provide new or additional information for the department's consideration. In conducting a reevaluation, the department shall consider the criteria set forth in sub. (2)(b) and (c) and other information that it deems relevant.

NR 445.14 Hazardous air contaminant studies. **(1)** The department may conduct studies of individual substances or categories or sources of substances if it determines that unique complexities may warrant alternative approaches to those listed in this chapter, or if the department otherwise needs additional information to determine whether to list the contaminant in Table A, B or C of s. NR 445.07.

Note: Unique complexities may be the result of the nature of the emissions, the sources of emissions, the management of emissions or other factors. The studies will not include a re-evaluation of the classification of the substance as reported by the American Conference of Government Industrial Hygienists, the United States environmental protection agency, the International Agency for Research on Cancer, or the National Toxicology Program.

(2) The department staff shall, in consultation with affected industry, public health officials and other interested parties, undertake 2 separate studies of the emissions of amorphous and crystalline silica and wood dust. The studies shall evaluate the sources and amounts of emissions and alternative strategies for minimizing public health risks. The department staff shall report progress on the studies to the natural resources board by 24 calendar months after the effective date of this section… [revisor inserts date].

(3) The department shall evaluate the listing of substances added to this chapter on the effective date of this section… [revisor insert date] using the criteria set forth in s. NR 445.13(2)(d) prior to listing additional substances in Table A, B or C of s. NR 445.07.

SECTION 64. NR 445.15(2) and (3) are created to read:

NR 445.15(2)(a) If it is determined that emissions of a hazardous air contaminant from a facility do not comply with an applicable emission requirement for that contaminant, the owner or operator will not be out of compliance with respect to that contaminant if the owner or operator satisfies all of the following:

1. Exercised due diligence and followed the procedures and other provisions in this subchapter for identifying and quantifying hazardous air contaminants.

Note: Examples of procedures in this subchapter include stack thresholds, risk-based modeling and applicability criteria for sources of incidental emissions.

2. Based on the results of subd. 1., either concluded that no emission requirements applied to that contaminant or complied with all emission requirements that applied to that contaminant.

3. Within 21 calendar days of making the determination that a hazardous air contaminant does not comply with an applicable emission requirement for that contaminant, submits the determination in writing to the department.

4. By the later of the deadlines in s. NR 445.08(6) or 90 calendar days after making the determination of noncompliance, certifies that the facility meets provisions applicable for the hazardous air contaminant.

(b) After receipt of a written request, the department may, in writing, extend the deadline for achieving compliance with the deadline in par. (a)4.

Note: The address for submittal of information and requests for an extension from the deadline in par. (a)4. is:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707-7921

Attention: NR 445 Safe Harbor Determinations.

(c) Notwithstanding par. (a), the department retains the authority to order the owner or operator to come into 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.

(3) The department shall review emissions reported under ch. NR 438 from sources of the contaminants listed in s. NR 410.04(2)(b)5. If the department determines that emissions are of such quantity, concentration or duration that a concentration greater than 2.4% of the contaminant's 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), is expected to occur off of the source's property, it may establish a limitation in a permit or order that will ensure the source does not cause concentrations off of the source's property that exceed 2.4% of the threshold limit value-time weighted average for any consecutive 24-hour averaging period.

SECTION 65. NR 445.16 Note is created to read:

NR 445.16 **Note:** The owner or operator of a facility is responsible for determining whether a substance released (or spilled) is considered a hazardous substance as defined in s. 292.01(5), Stats., and whether that hazardous substance was released to the environment. Section NR 706.05(1)(a) contains language that assists in making such a determination. If the facility owner or operator determines that a release of a hazardous substance to the environment has occurred, the spills law, s. 292.11, Stats. and the rules contained in ch. NR 706 apply. Both ch. 292, Stats., and ch. NR 706 contain exemptions to the spill reporting requirements. In addition, s. NR 706.07(2)(b)1., 2., 3. and 4. contain language specifying when those exemptions do not apply, including impacts or threats to the environment, human health or safety. Other regulations, permits, and reporting requirements, including s. NR 439.03(4) and ch. NR 438, may also apply to the hazardous substance release.

SECTION 66. NR 446.02 (intro.) is amended to read:

NR 446.02 Definitions. (intro.) The definitions contained in ~~chs.~~ ch. NR 400 ~~and 445~~ apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

SECTION 67. NR 447.02 (intro.) is amended to read:

NR 447.02 Definitions. (intro.) The definitions contained in ~~chs.~~ ch. NR 400 ~~and 445~~ apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

SECTION 68. NR 448.02 (intro.) is amended to read:

NR 448.02 Definitions. (intro.) The definitions contained in ~~chs.~~ ch. NR 400 ~~and 445~~ apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

SECTION 69. NR 448.02(1) is renumbered NR 448.02(1m)

SECTION 70. NR 448.02(1) is created to read:

NR 448.02(1) "Beryllium" means the element beryllium. Where weights or concentrations are specified, the weights or concentrations apply to beryllium only, excluding the weight or concentration of any associated elements.

SECTION 71. NR 449.02 (intro.) is amended to read:

NR 449.02 Definitions. (intro.) The definitions contained in ~~chs.~~ ch. NR 400 ~~and 445~~ apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

SECTION 72. NR 468.20(1)(b) Note is repealed.

SECTION 73. NR 484.04(23) is amended to read:

CFR Appendix Referenced		Title	Incorporated by Reference For
NR 484.04			
(23)	40 CFR part 61 Appendix B	Test Methods	NR 400.02(131) NR 439

~~NR 445.02(9m)~~
NR 446 to NR 469

SECTION 74. NR 484.05(1) is amended to read:

Document Reference		Document Title	Incorporated by Reference For
NR 484.05			
(1)	NTIS Order No. PB 87-100012	Standard Industrial Classification Manual, 1987	NR 400.02(74) NR 400.02(86) NR 400.02(91) NR 400.02(149) NR 405.02(8) NR 407.02(4)(intro.) NR 407.05(4)(b) NR 408.02(5) NR 410.02(4) NR 421.02(3) NR 421.02(17) NR 422.02(112) NR 422.095(1) NR 422.15(1)(intro.) NR 438.02(1) NR 445.11(1)(intro.) NR 465.02(51)

SECTION 75. NR 484.11(2)(b) is amended to read:

Document Number		Title	Incorporated by Reference For
NR 484.11(2)			
(b)	ISBN:0-936712-86-4	1990-1991 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices	NR 445.04(4)(a)1. NR 445.04(4)(a)2. NR 445.04(4)(b) NR 445.04(4r)(b)4. NR 445.05(4)(a)1. NR 445.05(4)(a)2. NR 445.05(4)(b) NR 445.05(4r)(b)4. ~~NR 445.06(4)~~

SECTION 76. NR 484.11(2)(c) is created to read:

Document Number		Title	Incorporated by Reference For
NR 484.11(2)			
(c)	ISBN:1-882417-36-4	2000 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices	NR 445.07(1)(b)(intro.) NR 445.07(5)(d)2. NR 445.15(3)

SECTION 77. EFFECTIVE DATE. This rule shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22 (2)(intro.), Stats.

SECTION 78. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on April 22, 2003 and February 25, 2004.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By_____
Scott Hassett, Secretary

(SEAL)