

## Chapter NR 438

### AIR CONTAMINANT EMISSION INVENTORY REPORTING REQUIREMENTS

NR 438.01 Applicability; purpose.  
NR 438.02 Definitions.

NR 438.03 Required emission inventory reports.  
NR 438.04 Content of emission inventory reports.

**Note:** Correction made under s. 13.93 (2m) (b) 7., Stats., Register, December, 1996, No. 492.

ruary, 1995, No. 470, eff. 3-1-95; am. (2), Register, October, 1999, No. 526, eff. 11-1-99.

**NR 438.01 Applicability; purpose. (1) APPLICABILITY.** This chapter applies to all air contaminant sources and to their owners and operators.

**(2) PURPOSE.** The purpose of this chapter is to establish, pursuant to ss. 285.11, 285.13, 285.17 and 299.15 (1) and (2), Stats., requirements for submission of reports for owners or operators of air contaminant sources.

**History:** Cr. Register, May, 1993, No. 449, eff. 6-1-93.

**NR 438.02 Definitions.** 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:

**(1) "Facility"** means all stationary sources emitting air contaminants which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person, or persons under common control. Emissions resulting from loading, unloading or stockpiling materials to or from vessels or vehicles while at a facility shall be considered as part of the facility's emissions. Air contaminant sources, other than transportation related activities, shall be considered as part of the same industrial grouping if they are classified under the same 2-digit major group as described in the Standard Industrial Classification Manual, 1987, incorporated by reference in s. NR 484.05 (1).

**(2) "Source classification code"** means an 8-position code which represents a process or function associated with a point of air contaminant emissions, as set forth by EPA in FIRE Version 6.23, incorporated by reference in s. NR 484.06 (4) (a).

**History:** Cr. Register, May, 1993, No. 449, eff. 6-1-93; am. (1), (2), Register, Feb-

**NR 438.03 Required emission inventory reports.**

**(1) REPORTABLE AIR CONTAMINANTS AND LEVELS.** (a) Except as provided in par. (am), any person owning or operating a facility that emits an air contaminant in quantities above applicable reporting levels, except indirect sources of air pollution, shall annually submit to the department an emission inventory report of annual, actual emissions or, for particulate matter, PM<sub>10</sub>, sulfur dioxide, nitrogen oxides, carbon monoxide and volatile organic compounds, throughput information sufficient for the department to calculate its annual, actual emissions. The reportable air contaminants and applicable reporting levels are listed in Table 1.

(am) 1. 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 1.

(b) When preparing 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 column (i) of Table A, B or C or s. NR 445.07, unless a hazardous air contaminant is formed in processing the material.

**Table 1**  
**Reporting Levels for Calendar Years 2004 and Later**

Air Contaminant Name	CAS Number <sup>1</sup>	Reporting Level (lbs/yr)
Acetaldehyde	75-07-0	404
Acetamide	60-35-5	6,000
Acetic acid	64-19-7	5,774
Acetic anhydride	108-24-7	4,912
Acetone	67-64-1	100,000
Acetonitrile	75-05-8	6,000
Acetophenone	98-86-2	6,000
2-Acetylaminofluorene	53-96-3	6,000
Acrolein	107-02-8	75
Acrylamide	79-06-1	0.683
Acrylic acid	79-10-7	88.8
Acrylonitrile	107-13-1	13.1
Adipic acid	124-04-9	1,176
Adiponitrile	111-69-3	2,080
Adriamycin	23214-92-8	1.22
Aflatoxins	1402-68-2	1.22
Aldrin	309-00-2	58.8

**Table 1 (continued)**  
**Reporting Levels for Calendar Years 2004 and Later**

<b>Air Contaminant Name</b>	<b>CAS Number<sup>1</sup></b>	<b>Reporting Level (lbs/yr)</b>
Allyl alcohol . . . . .	107-18-6	279
Allyl chloride . . . . .	107-05-1	736
Allyl glycidyl ether . . . . .	106-92-3	1,098
Aluminum alkyls and soluble salts, as Al . . . . .	7429-90-5 <sup>2</sup>	471
Aluminum pyro powders, as Al . . . . .	7429-90-5 <sup>2</sup>	1,176
o-Aminoazotoluene (2-Aminoazotoluene) . . . . .	97-56-3	0.808
4-Aminobiphenyl . . . . .	92-67-1	0.148
Amitrole . . . . .	61-82-5	3.29
<sup>3</sup> Ammonia . . . . .	7664-41-7	4,097
Ammonium perfluorooctanoate . . . . .	3825-26-1	2.35
Aniline . . . . .	62-53-3	1,792
o-Anisidine and o-anisidine hydrochloride (mixtures and isomers) . . . . .	29191-52-4 <sup>2</sup>	22.2
Antimony & compounds, as Sb . . . . .	7440-36-0 <sup>2</sup>	118
Antimony trioxide . . . . .	1309-64-4	17.8
ANTU . . . . .	86-88-4	70.6
Arsenic, elemental and inorganic compounds, as As . . . . .	7440-38-2 <sup>2</sup>	0.207
<sup>3</sup> Arsine . . . . .	7784-42-1	4.44
Asbestos, all forms . . . . .	1332-21-4 <sup>2</sup>	1.22
Atrazine . . . . .	1912-24-9	1,176
Azathioprine . . . . .	446-86-6	1.74
Azinphos-methyl . . . . .	86-50-0	47.1
Barium, soluble compounds, as Ba . . . . .	7440-39-3 <sup>2</sup>	118
Benomyl . . . . .	17804-35-2	2,353
Benz(a)anthracene . . . . .	56-55-3	8.08
Benzene . . . . .	71-43-2	114
Benzidine . . . . .	92-87-5	0.0133
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)phenanthrene . . . . .	205-82-3	1.22
Benzo(k)fluoranthene . . . . .	207-08-9	1.22
Benzo(a)pyrene . . . . .	50-32-8	0.808
Benzotrithloride . . . . .	98-07-7	1.22
Benzoyl chloride . . . . .	98-88-4	940
Benzoyl peroxide . . . . .	94-36-0	1,176
Benzyl acetate . . . . .	140-11-4	6,000
Benzyl chloride . . . . .	100-44-7	1,218
Beryllium and beryllium compounds, as Be . . . . .	7440-41-7 <sup>2</sup>	0.37
Biphenyl . . . . .	92-52-4	297
Bischloroethyl 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 BI <sub>2</sub> Te <sub>3</sub> : Se-doped . . . . .	1304-82-1	1,176
Borates, tetra, sodium salts, decahydrate . . . . .	1303-96-4 <sup>2</sup>	1,176
Borates, tetra, sodium salts, pentahydrate . . . . .	1303-96-4 <sup>2</sup>	235
Boron tribromide . . . . .	10294-33-4	3,352
<sup>3</sup> Boron trifluoride . . . . .	7637-07-2	907
Bromacil . . . . .	314-40-9	2,353
<sup>3</sup> Bromine . . . . .	7726-95-6	154
<sup>3</sup> Bromine pentafluoride . . . . .	7789-30-2	168
Bromodichloromethane . . . . .	75-27-4	24
Bromoform . . . . .	75-25-2	1,216

**Table 1 (continued)**  
**Reporting Levels for Calendar Years 2004 and Later**

<b>Air Contaminant Name</b>	<b>CAS Number<sup>1</sup></b>	<b>Reporting Level (lbs/yr)</b>
1,3-Butadiene	106-99-0	3.17
sec-Butanol	78-92-2	100,000
tert-Butanol	75-65-0	100,000
<sup>4</sup> 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
t-Butyl acetate	540-88-5	see footnote 7
n-Butyl acrylate	141-32-2	2,467
n-Butylamine	109-73-9	4,892
Butylated hydroxyanisole (BHA)	25013-16-5	6,000
tert-Butyl chromate, as Cr	1189-85-1	0.074
n-Butyl glycidyl ether (BGE)	2426-08-6	6,000
n-Butyl lactate	138-22-7	6,000
o-sec-Butylphenol	89-72-5	6,000
p-tert-Butyltoluene	98-51-1	1,426
C.I. Basic Red 9 monohydrochloride	569-61-9	12.5
Cadmium and cadmium compounds, as Cd	7440-43-9 <sup>2</sup>	0.494
Calcium cyanamide	156-62-7	118
Calcium hydroxide	1305-62-0	1,176
Calcium oxide	1305-78-8	471
Camphor (synthetic)	76-22-2	2,930
Caprolactam (aerosol and vapor)	105-60-2	5,444
Captafol	2425-06-1	23.5
Captan	133-06-2	1,176
Carbaryl	63-25-2	1,176
Carbofuran	1563-66-2	23.5
Carbon dioxide	124-38-9	100,000 tons
Carbon monoxide	630-08-0	10,000
Carbon black	1333-86-4	823
Carbon disulfide	75-15-0	6,000
Carbon tetrabromide	558-13-4	319
Carbon tetrachloride	56-23-5	59.2
Carbonyl fluoride	353-50-4	1,270
Carbonyl sulfide	463-58-1	6,000
Catechol (Pyrocatechol)	120-80-9	5,298
Refractory Ceramic Fibers (respirable size)	<sup>2</sup>	1.22
Cesium hydroxide	21351-79-1	471
Chloramben	133-90-4	6,000
Chlorambucil	305-03-3	0.00683
Chlordane	57-74-9	118
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
<sup>3</sup> Chlorine	7782-50-5	341
<sup>3</sup> Chlorine dioxide	10049-04-4	64.9
<sup>3</sup> 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

**Table 1 (continued)**  
**Reporting Levels for Calendar Years 2004 and Later**

<b>Air Contaminant Name</b>	<b>CAS Number<sup>1</sup></b>	<b>Reporting Level (lbs/yr)</b>
<sup>3</sup> 1-Chloro-1, 1-difluoroethane (Hydrochlorofluorocarbon-142b; HCFC-142b; R-142b)	75-68-3	6,000
<sup>3</sup> 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
<sup>3</sup> Chlorofluorocarbon-11 (CFC-11; R-11; Trichlorofluoromethane)	75-69-4	6,000
<sup>3</sup> Chlorofluorocarbon-111 (CFC-111)	954-56-3	6,000
<sup>3</sup> Chlorofluorocarbon-112 (CFC-112)	76-12-0	6,000
<sup>3</sup> Chlorofluorocarbon-113 (CFC-113; R-113; Trichlorotrifluoroethane)	76-13-1	6,000
<sup>3</sup> Chlorofluorocarbon-114 (CFC-114; R-114; Dichlorotetrafluoroethane)	76-14-2	6,000
<sup>3</sup> Chlorofluorocarbon-115 (CFC-115; R-115; Monochloropentafluoroethane)	76-15-3	6,000
<sup>3</sup> Chlorofluorocarbon-12 (CFC-12; R-12; Dichlorodifluoromethane)	75-71-8	6,000
<sup>3</sup> Chlorofluorocarbon-13 (CFC-13; R-13; Chlorotrifluoromethane)	75-72-9	6,000
<sup>3</sup> Chlorofluorocarbon-211 (CFC-211; R-211)	422-78-6	6,000
<sup>3</sup> Chlorofluorocarbon-212 (CFC-212; R-212)	3182-26-1	6,000
<sup>3</sup> Chlorofluorocarbon-213 (CFC-213; R-213)	165-97-7	6,000
<sup>3</sup> Chlorofluorocarbon-214 (CFC-214; R-214)	29255-31-0	6,000
<sup>3</sup> Chlorofluorocarbon-215 (CFC-215; R-215)	4259-43-2	6,000
<sup>3</sup> Chlorofluorocarbon-216 (CFC-216; R-216)	661-97-2	6,000
<sup>3</sup> Chlorofluorocarbon-217 (CFC-217; R-217)	422-86-6	6,000
Chloroform	67-66-3	38.6
Chloromethyl methyl ether (CMME)	107-30-2	1.22
1-Chloro-1-nitropropane	600-25-9	2,378
Chloropicrin (Trichloronitromethane)	76-06-2	158
$\beta$ -Chloroprene	126-99-8	1.22
o-Chlorostyrene	2039-87-4	6,000
o-Chlorotoluene	95-49-8	6,000
Chlorpyrifos	2921-88-2	47.1
Chromium (metal) and compounds other than chromium (VI)	7440-47-3 <sup>2</sup>	118
Chromium (VI): Chromic acid mists and dissolved Cr (VI) aerosols, as Cr	7440-47-3 <sup>2</sup>	0.074
Chromium (VI) compounds and particulates	7440-47-3 <sup>2</sup>	0.074
Chromyl chloride, as Cr	14977-61-8	0.074
Cobalt, elemental, and inorganic compounds, as Co	7440-48-4 <sup>2</sup>	4.71
<sup>3</sup> Coke oven emissions	2	1.43
Copper and compounds, fume, as Cu	7440-50-8 <sup>2</sup>	47.1
Copper and compounds, dust & mists, as Cu	7440-50-8 <sup>2</sup>	235
p-Cresidine	120-71-8	20.7
Cresol (mixtures and isomers)	1319-77-3 <sup>2</sup>	5,203
Crotonaldehyde	4170-30-3 <sup>2</sup>	281
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 <sup>2</sup>	1,635
Cyanogen	460-19-5	5,008
Cyanogen chloride	506-77-4	247
Cyclohexanol	108-93-0	6,000
Cyclohexanone	108-94-1	6,000
Cyclohexylamine	108-91-8	6,000
Cyclonite	121-82-4	118
Cyclopentadiene	542-92-7	6,000
Cyclophosphamide	50-18-0	5.23
Cyhexatin	13121-70-5	1,176
2,4-D, salts and esters	94-75-7	6,000
Dacarbazine	4342-03-4	0.0635

**Table 1 (continued)**  
**Reporting Levels for Calendar Years 2004 and Later**

<b>Air Contaminant Name</b>	<b>CAS Number<sup>1</sup></b>	<b>Reporting Level (lbs/yr)</b>
DDE	72-55-9	6,000
Demeton	8065-48-3	24.9
Diacetone alcohol	123-42-2	6,000
2,4-Diaminoanisole sulfate	39156-41-7	240
2,4-Diaminotoluene (Toluene-2,4-diamine)	95-80-7 <sup>2</sup>	0.808
Diazinon	333-41-5	23.5
Diazomethane	334-88-3	80.9
Dibenz(a,h)acridine	226-36-8	8.08
Dibenz(a,j)acridine	224-42-0	8.08
Dibenz(a,h)anthracene	53-70-3	0.74
7H-Dibenzo(c,g)carbazole	194-59-2	0.808
Dibenzofurans	132-64-9 <sup>2</sup>	6,000
Dibenzo(a,e)pyrene	192-65-4	0.808
Dibenzo(a,h)pyrene	189-64-0	0.0808
Dibenzo(a,i)pyrene	189-55-9	0.0808
Dibenzo(a,l)pyrene	191-30-0	0.0808
<sup>3</sup> Diborane	19287-45-7	26.6
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.468
1,2-Dibromoethane (Ethylene Dibromide; EDB)	106-93-4	4.04
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

**Table 1 (continued)**  
**Reporting Levels for Calendar Years 2004 and Later**

<b>Air Contaminant Name</b>	<b>CAS Number<sup>1</sup></b>	<b>Reporting Level (lbs/yr)</b>
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 <sup>2</sup>	243
Dinitro-o-cresol (4,6-Dinitro-o-cresol)	534-52-1	47.1
2,4-Dinitrophenol	51-28-5	6,000
Dinitrotoluene (mixtures and isomers)	25321-14-6 <sup>2</sup>	47.1
n-Dioctyl phthalate	117-84-0	6,000
1,4-Dioxane (1,4-Diethylene oxide)	123-91-1	115
Dioxathion	78-34-2	47.1
Diquat, respirable dust (various compounds) (Diquat dibromide)	2764-72-9 <sup>2</sup>	23.5
Diquat, total dust (various compounds) (Diquat dibromide)	2764-72-9 <sup>2</sup>	118
Direct black 38 (Benzidine-based dye)	1937-37-7	0.423
Direct blue 6 (Benzidine-based dye)	2602-46-2	0.423
Disperse Blue 1	2475-45-8	683
Disulfiram	97-77-8	471
Disulfoton	298-04-4	23.5
Divinyl benzene (mixtures and isomers)	1321-74-0 <sup>2</sup>	6,000
Endosulfan	115-29-7	23.5
Endrin	72-20-8	23.5
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106-89-8	88.8
EPN	2104-64-5	23.5
1,2-Epoxybutane (1,2-Butylene oxide)	106-88-7	1,777
Ethanolamine	141-43-5	1,763
Ethion	563-12-2	94.1
<sup>4</sup> 2-Ethoxyethanol (Ethylene glycol monoethyl ether; EGEE; Cellosolve)	110-80-5	4,336
<sup>4</sup> 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

**Table 1 (continued)**  
**Reporting Levels for Calendar Years 2004 and Later**

<b>Air Contaminant Name</b>	<b>CAS Number<sup>1</sup></b>	<b>Reporting Level (lbs/yr)</b>
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
<sup>3</sup> 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
<sup>3</sup> Germanium tetrahydride	7782-65-2	147
Glutaraldehyde	111-30-8	67
Glycidol	556-52-5	1.22
<sup>5</sup> Glycol ethers	2	6,000
Graphite (all forms except graphite fiber)	7782-42-5	471
<sup>3</sup> Halon-1211 (Bromochlorodifluoromethane)	353-59-3	6,000
<sup>3</sup> Halon-1301 (Bromotrifluoromethane)	75-63-8	6,000
<sup>3</sup> Halon-2402 (Dibromotetrafluoroethane)	124-73-2	6,000
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 phosphoramidate	680-31-9	1.22
Hexamethylene-1,6-diisocyanate (HDI)	822-06-0	0.888
n-Hexane	110-54-3	6,000
1,6-Hexanediamine	124-09-4	559
1-Hexene	592-41-6	6,000
sec-Hexyl acetate	108-84-9	6,000
Hexylene glycol	107-41-5	6,000
Hydrazine and hydrazine sulfate	302-01-2 <sup>2</sup>	0.181
<sup>3</sup> Hydrochlorofluorocarbon-121 (HCFC-121)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-122 (HCFC-122)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-123 (HCFC-123, R-123)	306-83-2 <sup>2</sup>	6,000
<sup>3</sup> Hydrochlorofluorocarbon-124 (HCFC-124, R-124)	63938-10-3 <sup>2</sup>	6,000
<sup>3</sup> Hydrochlorofluorocarbon-131 (HCFC-131)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-132b (HCFC-132b)	1649-08-7	6,000
<sup>3</sup> Hydrochlorofluorocarbon-133a (HCFC-133a)	75-88-7	6,000
<sup>3</sup> Hydrochlorofluorocarbon-141b (HCFC-141b, R-141b)	1717-00-6	6,000
<sup>3</sup> Hydrochlorofluorocarbon-21 (HCFC-21, Dichlorofluoromethane)	75-43-4	6,000
<sup>3</sup> Hydrochlorofluorocarbon-221 (HCFC-221)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-222 (HCFC-222)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-223 (HCFC-223)	2	6,000

**Table 1 (continued)**  
**Reporting Levels for Calendar Years 2004 and Later**

<b>Air Contaminant Name</b>	<b>CAS Number<sup>1</sup></b>	<b>Reporting Level (lbs/yr)</b>
<sup>3</sup> Hydrochlorofluorocarbon-224 (HCFC-224)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-225 ca (HCFC-225ca)	422-56-0	6,000
<sup>3</sup> Hydrochlorofluorocarbon-225 cb (HCFC-225cb)	507-55-1	6,000
<sup>3</sup> Hydrochlorofluorocarbon-226 (HCFC-226)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-231 (HCFC-231)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-232 (HCFC-232)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-233 (HCFC-233)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-234 (HCFC-234)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-235 (HCFC-235)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-241 (HCFC-241)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-242 (HCFC-242)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-243 (HCFC-243)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-244 (HCFC-244)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-251 (HCFC-251)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-252 (HCFC-252)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-253 (HCFC-253)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-261 (HCFC-261)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-262 (HCFC-262)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-271 (HCFC-271)	2	6,000
<sup>3</sup> Hydrochlorofluorocarbon-31 (HCFC-31; R-31; Chlorofluoromethane)	593-70-4	6,000
Hydrogenated terphenyls	61788-32-7	1,160
<sup>3</sup> Hydrogen bromide	10035-10-6	3,247
<sup>3</sup> Hydrogen chloride (Hydrochloric acid; Muriatic acid)	7647-01-0	1,777
<sup>3</sup> Hydrogen cyanide	74-90-8	1,699
<sup>3</sup> Hydrogen fluoride (Hydrofluoric acid)	7664-39-3	803
<sup>3</sup> Hydrogen peroxide	7722-84-1	327
<sup>3</sup> 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
<sup>3</sup> 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
Isoprene	78-79-5	1.22
<sup>4</sup> 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 <sup>2</sup>	6,000
Lead Phosphate, as Pb	7446-27-7	74
Lindane and other hexachlorocyclohexane isomers	58-89-9 <sup>2</sup>	2.87
Maleic anhydride	108-31-6	94.4



**Table 1 (continued)**  
**Reporting Levels for Calendar Years 2004 and Later**

<b>Air Contaminant Name</b>	<b>CAS Number<sup>1</sup></b>	<b>Reporting Level (lbs/yr)</b>
Manganese, dust and inorganic compounds, as Mn	7439-96-5 <sup>2</sup>	47.1
Melphalan	148-82-3	0.024
<sup>3</sup> Mercury, as Hg, alkyl compounds	7439-97-6 <sup>2</sup>	2.35
<sup>3</sup> Mercury, as Hg, aryl compounds	7439-97-6 <sup>2</sup>	23.5
<sup>3</sup> Mercury, as Hg, inorganic forms including metallic mercury,	7439-97-6 <sup>2</sup>	5.88
Mesityl oxide	141-79-7	6,000
Mestranol	72-33-3	1.22
Methacrylic acid	79-41-4	6,000
Methanol	67-56-1	6,000
Methomyl	16752-77-5	588
Methoxychlor	72-43-5	6,000
<sup>4</sup> 2-Methoxyethanol (Methyl Cellosolve; EGME)	109-86-4	3,661
<sup>4</sup> 2-Methoxyethyl acetate (Methyl Cellosolve acetate; EGMEA)	110-49-6	5,684
4-Methoxyphenol	150-76-5	1,176
<sup>3</sup> 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
<sup>3</sup> Methylene chloride (Dichloromethane)	75-09-2	1,890
4,4'-Methylene bis(2-chloroaniline) (MOCA)	101-14-4	2.07
Methylene bis(4-cyclohexylisocyanate)	5124-30-1	12.6
4,4'-Methylenedianiline (and dihydrochloride)	101-77-9 <sup>2</sup>	1.93
Methyl ethyl ketone peroxide	1338-23-4	472
Methyl formate	107-31-3	6,000
Methyl hydrazine	60-34-4	4.43
Methyl iodide (Iodomethane)	74-88-4	2,732
Methyl isoamyl ketone	110-12-3	6,000
Methyl isobutyl carbinol	108-11-2	6,000
Methyl isobutyl ketone (MIBK; Hexone)	108-10-1	6,000
Methyl isocyanate	624-83-9	11
Methyl methacrylate	80-62-6	6,000
N-Methyl-N'-nitro-N-nitrosoguanidine (MNNG)	70-25-7	0.37
Methyl parathion	298-00-0	47.1
α-Methyl styrene	98-83-9	6,000
Methyl tert-butyl ether (MTBE)	1634-04-4	6,000
Metribuzin	21087-64-9	1,176
Mevinphos (Phosdrin)	7786-34-7	21.2
Mirex	2385-85-5	0.174
Molybdenum, as Mo, metal and insoluble compounds	7439-98-7 <sup>2</sup>	2,353

**Table 1 (continued)**  
**Reporting Levels for Calendar Years 2004 and Later**

<b>Air Contaminant Name</b>	<b>CAS Number<sup>1</sup></b>	<b>Reporting Level (lbs/yr)</b>
Molybdenum, as Mo, soluble compounds	7439-98-7 <sup>2</sup>	1,176
Monocrotophos	6923-22-4	58.8
Morpholine	110-91-8	6,000
Mustard gas	505-60-2	1.22
Myleran (1,4-Butanediol dimethanesulphonate; Busulphan)	55-98-1	1.22
Naled	300-76-5	706
Naphthalene	91-20-3	6,000
2-Naphthylamine	91-59-8	1.22
Nickel and compounds, as Ni	7440-02-0 <sup>2</sup>	3.42
Nickel carbonyl, as Ni	13463-39-3	3.42
Nickel subsulfide, as Ni	12035-72-2	1.85
Nitric acid	7697-37-2	1,213
Nitrilotriacetic acid	139-13-9	592
p-Nitroaniline	100-01-6	706
Nitrobenzene	98-95-3	1,185
4-Nitrobiphenyl	92-93-3	6,000
p-Nitrochlorobenzene	100-00-5	152
Nitroethane	79-24-3	6,000
Nitrogen mustards (2,2'-Dichloro-N-methyl-diethylamine)	51-75-2	1.22
<sup>3</sup> Nitrogen oxides	<sup>2</sup>	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'-Nitrosornicotine	16543-55-8	1.22
N-Nitrosopiperidine	100-75-4	0.329
N-Nitrosopyrrolidine	930-55-2	1.46
N-Nitrososarcosine	13256-22-9	1.22
Nitrotoluene, mixtures and isomers	88-72-2 <sup>2</sup>	2,639
Nitrous oxide	10024-97-2	6,000
Octachloronaphthalene	2234-13-1	23.5
Octachlorostyrene	29082-74-4	10
Octane (all isomers)	111-65-9 <sup>2</sup>	100,000
Oestradiol (Estradiol)	50-28-2	0.0808
Oxalic acid	144-62-7	235
p,p'-Oxybis (benzenesulfonyl hydrazide)	80-51-3	23.5
Paraquat (respirable sizes) (Paraquat chloride)	1910-42-5 <sup>2</sup>	23.5
Parathion	56-38-2	23.5
<sup>3</sup> Particulate matter	<sup>2</sup>	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

**Table 1 (continued)**  
**Reporting Levels for Calendar Years 2004 and Later**

<b>Air Contaminant Name</b>	<b>CAS Number<sup>1</sup></b>	<b>Reporting Level (lbs/yr)</b>
Pentane, all isomers	78-78-4* <sup>2</sup>	100,000
Pentyl Acetate (mixtures and isomers)	628-63-7 <sup>2</sup>	6,000
<sup>3</sup> Perchloroethylene (Tetrachloroethylene)	127-18-4	151
Perchloromethyl mercaptan	594-42-3	179
Perfluoroisobutylene	382-21-8	26.7
Persulfates (Ammonium, Potassium, Sodium)	7727-54-0 <sup>2</sup>	23.5
Perylene	198-55-0	10
Phenazopyridine and phenazopyridine hydrochloride	136-40-3 <sup>2</sup>	18.1
Phenol	108-95-2	4,528
Phenolphthalein	77-09-8	1.22
Phenothiazine	92-84-2	1,176
Phenylenediamine (mixtures and isomers)	106-50-3	23.5
Phenyl ether vapor	101-84-8	1,638
Phenyl glycidyl ether (PGE)	122-60-1	145
Phenylhydrazine	100-63-0	104
Phenyl mercaptan	108-98-5	530
Phenytoin and sodium salt of phenytoin	57-41-0 <sup>2</sup>	1.22
Phorate	298-02-2	11.8
Phosgene	75-44-5	95.2
<sup>3</sup> 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
<sup>3</sup> Phosphorus pentachloride	10026-13-8	200
Phosphorus pentasulfide	1314-80-3	235
<sup>3</sup> Phosphorus trichloride	7719-12-2	264
Phthalic anhydride	85-44-9	1,425
Picric acid	88-89-1	23.5
Pindone	83-26-1	23.5
Platinum (metal)	7440-06-4	235
Platinum, soluble salts, as Pt	7440-06-4 <sup>2</sup>	0.471
PM10	<sup>2</sup>	10,000
Polybrominated biphenyls (PBBs; Bromodiphenyls)	59536-65-1 <sup>2</sup>	0.103
Polychlorinated biphenyls (PCBs; Chlorodiphenyls; Arochlor)	1336-36-3 <sup>2</sup>	0.05
Polycyclic organic matter (POM)	<sup>2</sup>	125
Potassium hydroxide	1310-58-3	654
Procarbazine and procarbazine hydrochloride	366-70-1 <sup>2</sup>	0.222
1,3-Propane sultone	1120-71-4	1.29
Propargyl alcohol	107-19-7	539
$\beta$ -Propiolactone	57-57-8	0.222
Propionaldehyde	123-38-6	6,000
Propionic acid	79-09-4	6,000
Propoxur (Baygon)	114-26-1	118
Propylene dichloride (1,2-Dichloropropane)	78-87-5	355
Propylene glycol monomethyl ether (PGME)	07-98-2	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

**Table 1 (continued)**  
**Reporting Levels for Calendar Years 2004 and Later**

<b>Air Contaminant Name</b>	<b>CAS Number<sup>1</sup></b>	<b>Reporting Level (lbs/yr)</b>
Rhodium (metal) and insoluble compounds, as Rh	7440-16-6 <sup>2</sup>	235
Rhodium, soluble compounds, as Rh	7440-16-6 <sup>2</sup>	2.35
Rotenone (commercial)	83-79-4	1,176
Safrole	94-59-7	14.1
Selenium and compounds, as Se	7782-49-2 <sup>2</sup>	47.1
<sup>3</sup> 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
<sup>3</sup> Stibine (Antimony hydride)	7803-52-3	120
Stoddard solvent (Mineral spirits)	8052-41-3	6,000
Streptozotocin	18883-66-4	0.0287
Strong inorganic acid mists containing sulfuric acid (>35% by weight)	7664-93-9 <sup>2</sup>	1.22
Strychnine	57-24-9	35.3
Styrene oxide	96-09-3	6,000
Styrene, monomer	100-42-5	6,000
Sulfometuron methyl	74222-97-2	1,176
Sulfotep (TEDP)	3689-24-5	47.1
<sup>3</sup> Sulfur dioxide	7446-09-5	10,000
Sulfur monochloride	10025-67-9	1,806
<sup>3</sup> Sulfur tetrafluoride	7783-60-0	145
Sulfuric acid	7664-93-9	235
<sup>3</sup> Sulfuryl fluoride	2699-79-8	4,911
Sulprofos	35400-43-2	235
Talc, containing no asbestos fibers	14807-96-6	471
Tantalum, metal and oxide dusts, as Ta	7440-25-7	1,176
Tellurium and compounds, except hydrogen telluride, as Te	13494-80-9 <sup>2</sup>	23.5
TEPP	107-49-3	11.8
Terphenyls	26140-60-3 <sup>2</sup>	1,635
1,2,3,4-Tetrachlorobenzene	634-66-2	10
1,2,4,5-Tetrachlorobenzene	95-94-3	10
2,3,7,8-Tetrachlorodibenzo-p-dioxin (Dioxin; 2,3,7,8-TCDD), as dioxin equivalents	1746-01-6 <sup>2</sup>	0.00005
1,1,2,2-Tetrachloroethane	79-34-5	1,615
Tetrachloronaphthalene	1335-88-2	471
1,1,1,2-Tetrafluoroethane	811-97-2	6,000
Tetrafluoroethylene	116-14-3	1.22
Tetrahydrofuran	109-99-9	6,000
Tetranitromethane	509-14-8	1.22
Thallium, elemental and soluble compounds, as Tl	7440-28-0 <sup>2</sup>	23.5
<sup>3</sup> Thionyl chloride	7719-09-7	1,592
Thiourea	62-56-6	42.3
Thiram	137-26-8	235
Tin organic compounds, as Sn	7440-31-5 <sup>2</sup>	23.5
Tin, metal oxides and inorganic compounds, except tin hydride, as Sn	7440-31-5 <sup>2</sup>	471
Titanium tetrachloride	7550-45-0	6,000
Toluene (Toluol)	108-88-3	6,000
2,4-/2,6-Toluene diisocyanate (mixtures and isomers) (TDI)	584-84-9 <sup>2</sup>	6.22
m- and p-Toluidine	108-44-1	2,062
o-Toluidine and o-toluidine hydrochloride and mixed isomers	95-53-4 <sup>2</sup>	17.4
<sup>3</sup> Total reduced sulfur and reduced sulfur compounds	2	10,000
Tributyl phosphate	126-73-8	513

**Table 1 (continued)**  
**Reporting Levels for Calendar Years 2004 and Later**

<b>Air Contaminant Name</b>	<b>CAS Number<sup>1</sup></b>	<b>Reporting Level (lbs/yr)</b>
Tributyl tin	56-35-9	10
1,2,4-Trichlorobenzene	120-82-1	6,000
1,1,2-Trichloroethane	79-00-5	6,000
Trichloroethylene (Trichloroethene)	79-01-6	444
Trichloronaphthalene	1321-65-9	1,176
2,4,5-Trichlorophenol	95-95-4	6,000
2,4,6-Trichlorophenol	88-06-2	287
1,2,3-Trichloropropane	96-18-4	1.22
Triethanolamine	102-71-6	1,176
Triethylamine	121-44-8	974
Trifluralin	1582-09-8	6,000
1,3,5-Triglycidyl-s-triazinetrione	2451-62-9	11.8
Trimellitic anhydride	552-30-7	13.1
Trimethyl benzene, (mixtures and isomers)	25551-13-7 <sup>2</sup>	6,000
Trimethylamine	75-50-3	2,844
2,2,4-Trimethylpentane	540-84-1	6,000
2,4,6-Trinitrotoluene (TNT)	118-96-7	23.5
Triorthocresyl phosphate	78-30-8	23.5
Triphenyl phosphate	115-86-6	706
Tris(1-aziridinyl)phosphine sulfide (Thiotepa)	52-24-4	0.261
Tris(2,3-dibromopropyl phosphate)	126-72-7	1.35
Tungsten – metal and insoluble compounds, as W	7440-33-7 <sup>2</sup>	1,176
Tungsten – soluble compounds, as W	7440-33-7 <sup>2</sup>	235
Uranium (natural), soluble and insoluble compounds, as U	7440-61-1 <sup>2</sup>	47.1
Urethane (Ethyl carbamate)	51-79-6	3.06
n-Valeraldehyde	110-62-3	6,000
Vanadium pentoxide, as V <sub>2</sub> O <sub>5</sub> , respirable dust and fume	1314-62-1	11.8
Vinyl acetate	108-05-4	6,000
Vinyl bromide	593-60-2	515
Vinyl chloride	75-01-4	101
Vinyl cyclohexene dioxide (4-Vinyl-1-cyclohexene diepoxide)	106-87-6	1.22
4-Vinyl cyclohexene	100-40-3	104
Vinyl fluoride	75-02-5	443
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4	4,665
Vinylidene fluoride	75-38-7	100,000
Vinyl toluene	25013-15-4	6,000
<sup>3,6</sup> Volatile organic compounds (Reactive organic gases)	<sup>2</sup>	6,000
Warfarin	81-81-2	23.5
Xylene (mixtures and isomers) (Xylol; Dimethyl Benzene)	1330-20-7 <sup>2</sup>	6,000
m-Xylene- $\alpha,\alpha'$ -diamine	1477-55-0	32.7
Xylidine (mixtures and isomers)	1300-73-8 <sup>2</sup>	583
Yttrium metal and compounds, as Y	7440-65-5 <sup>2</sup>	235
Zeolites (Erionite)	66733-21-9	1.22
Zirconium and compounds, as Zr	7440-67-7 <sup>2</sup>	1,176

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

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

<sup>3</sup>Indicates contaminants for which a fee will be assessed under s. NR 410.04. Emissions of all compounds listed in s. NR 400.02(162)(b) shall be included when determining fees for volatile organic compounds.

<sup>4</sup>Indicates compounds included in the glycol ethers group. In addition to being reported individually when a compound's emissions are above the reporting level, the emissions of these compounds are included in the glycol ethers emission total reported along with emissions of the many other such compounds not listed individually by name.

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

n=1, 2 or 3

R=alkyl C7 or less or

R=phenyl or alkyl substituted phenyl

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

<sup>6</sup>Organic compounds that are not VOC and should not be considered or included here are specified in s. NR 400.02 (162) (a). Emissions of organic compounds specified in s. NR 400.02 (162) (b) shall be considered to determine if the reporting level for VOC is exceeded. Emissions of these compounds, however, shall be reported separately as the individual compound if the reporting level for VOC is exceeded.

<sup>7</sup>Any amount of emissions of this compound shall be reported if the reporting level for VOC emissions is exceeded. See footnote 6 for how to determine if the reporting level for VOC emissions is exceeded.

(c) Notwithstanding par. (a), the department may require any facility to submit an emission inventory report of its annual, actual and maximum theoretical air contaminant emissions.

(d) Any facility that has emission reduction credits shall report the credits separately as actual emissions on the annual emission inventory report.

**(2) REPORTING DEADLINE.** Reports required under this section shall be submitted by March 1 of each year for air contaminants emitted during the preceding year. Persons unable to submit reports by March 1 may, upon request to the department, be granted an extension until March 15 for submission of the reports if the department determines that an extension is reasonable under the circumstances.

**(3) PORTABLE SOURCES.** The owner or operator of a portable source shall file one emission inventory report covering all operations at all locations in the state during the previous year.

**(4) REQUIRED RECORDS.** Owners and operators of facilities required to file emission inventory reports shall keep accurate and reliable records sufficient to enable verification of the reports by the department. Records shall include data on fuel composition and consumption, quantities of raw materials handled which contribute to emissions, quantities of wastes incinerated, continuous emissions monitoring data and audits, and any results of stack or performance tests together with the names of persons or firms responsible for each test, if applicable. Records shall be retained for 5 years following the year in which the emission inventory report is submitted.

**(5) EMISSION INVENTORY AND CERTIFICATION.** (a) Based on the throughput or emissions information submitted pursuant to ss. NR 438.03 and 438.04, the department shall determine each facility's annual actual emissions and typical ozone season day emissions based on emission factors contained in Compilation of Air Pollutant Emission Factors, AP-42, Volume 1: Stationary Point and Area Sources, USEPA-OAQPS, January 1995, as incorporated by reference in s. NR 484.05 (8), or in the FIRE database, USEPA-OAQPS, incorporated by reference in s. NR 484.06 (4) (a). Other emission factors or methods, including, but not limited to, mass balance or other use reporting, consumption and analytical methodologies, or continuous emissions monitoring data, if applicable, may be used by the department.

(b) The actual annual emissions determined by the department under par. (a) shall constitute the department's annual emission inventory.

(c) By May 31 of each year, the department shall send each owner or operator of a facility which is required to file an emission inventory report a summary from the department's annual emission inventory of the air contaminants emitted by the facility for the previous year. The owner or operator of a facility required to obtain an air pollution control permit under s. 285.60, Stats., and ch. NR 406, 407 or 408, or which emits volatile organic compounds or nitrogen oxides in an ozone nonattainment area, shall, by June 30 of each year, send a written certification to the department that the summary of its emissions is correct. The certification shall contain the name, title, signature and telephone number of the certifier, the date of certification and a statement that the information contained in the emissions summary is accurate to the best knowledge of the owner or operator of that facility.

**(6) DISPUTED EMISSIONS.** Any facility that disputes the emissions summary supplied by the department under sub. (5) (c) may request, in writing, that the department review its emissions sum-

mary. The department shall review and supply to the facility, within 14 calendar days of receipt of the facility's written request, information used to prepare the emission inventory and summary for that facility. If the facility continues to dispute the emissions summary, it shall supply to the department, within 14 calendar days of receipt of the department's information, the reasons it disputes the summary. The facility shall be notified within 7 calendar days of receipt of this information of the department's decision on whether to adjust the emission inventory and summary. If the facility continues to dispute the summary, it may appeal the department's final decision pursuant to state law. The facility shall certify any emissions not in dispute by June 30 of each year.

**History:** Cr. Register, May, 1993, No. 449, eff. 6-1-93; am. (1) (b), (5) (a), Register, February, 1995, No. 470, eff. 3-1-95; am. (1) (b), Table 1, Register, December, 1995, No. 480, eff. 1-1-96; am. (5) (a), Register, December, 1996, No. 492, eff. 1-1-97; am. Table 1 and (5) (a), Register, October, 1999, No. 526, eff. 11-1-99; CR 02-097: am. (1) (a) and (b), cr. (1) (am) and Table 2 Register June 2004 No. 582, eff. 7-1-04; CR 05-055: renum. (1) (a) (intro.) to be (a) and am., r. (1) (a) 1., 2. and Table 1, am. (1) (am), renum. Table 2 to be Table 1 and am. Register December 2005 No. 600, eff. 1-1-06.

#### NR 438.04 Content of emission inventory reports.

**(1) GENERAL INSTRUCTIONS.** Emission inventory reports required under this chapter shall be submitted on forms or other media supplied by the department. Emission inventory reports submitted by facilities shall contain the information specified in s. NR 438.03 (1) and (3) and this section. Emissions shall be reported separately for each source or group of similar sources at each facility.

**Note:** Emission inventory reports shall be made on form 4500-090 available from the Bureau of Air Management, Department of Natural Resources, PO Box 7921, Madison WI 53707, Phone (608) 267-7546.

**(2) FACILITY IDENTIFICATION AND GENERAL INFORMATION.** For all facilities the emission inventory report shall include:

- (a) The name and mailing address of the facility.
- (b) The location of the facility.
- (c) The name and address of the parent company or corporation, if any.
- (d) The appropriate facility standard industrial classification code and a brief description which characterizes the nature of the business or other activity of the facility.
- (e) The normal operation schedule of the facility in hours per day, days per week, days per year, and percentage production by quarter.
- (f) The name and telephone number of the individual to be contacted regarding the emission inventory report.
- (g) A list of stacks and the air contaminant sources vented to each stack including:
  1. Height of each stack.
  2. Inside top diameter of each stack.
  3. Volumetric flow rate through each stack at maximum and normal operating conditions.
  4. Temperature of the gas flowing through each stack at maximum and normal operating conditions.
  5. The type of continuous emission monitor and pollutant or pollutants monitored for each stack, if applicable.
- (h) A description of fugitive emissions, their type, source, operating schedule, estimated emissions or throughput, and control technique and estimated control efficiency.

**(3) FUEL COMBUSTION.** For fuel combustion units, the emission inventory report shall include:

- (a) Source classification code.

- (b) Number of boilers.
  - (c) Types of fuel burning equipment for each boiler.
  - (d) Rated capacity of each boiler.
  - (e) For each fuel burned:
    - 1. Type of fuel.
    - 2. Maximum and average quantity burned per hour.
    - 3. Quantity burned per year.
    - 4. Average hours of operation of each boiler using the fuel per day.
    - 5. Average and maximum sulfur content in percent by weight per fuel.
    - 6. Average and maximum ash content in percent by weight per fuel.
    - 7. Average and maximum heat content of fuel in Btus per unit per fuel.
  - (f) The type of air pollution control equipment in use and the actual control efficiency in percent.
- (4) MANUFACTURING PROCESSES.** For manufacturing processes which emit air contaminants, the emission inventory report shall include:
- (a) Process name and description.
  - (b) Source classification code.
  - (c) Quantity of raw materials used and handled for each process, maximum quantity per hour, and actual quantity per year.
  - (d) Description of annual, seasonal, monthly, weekly and daily operating cycle including downtime for maintenance and repairs.
  - (e) The type air pollution control equipment in use and the actual capture and control efficiency in percent.
- (5) INCINERATION.** For all incineration equipment, the emission inventory report shall include:
- (a) Source classification code.
  - (b) Type or description of waste.
  - (c) Percent of waste which is combustible.
  - (d) Capacity of incinerator in pounds of waste per hour.
  - (e) Residence time of the combustion products in the combustion chamber.
  - (f) Description of annual, seasonal, monthly, weekly and daily operating cycle including downtime for maintenance and repairs.
  - (g) The type of air pollution control equipment in use and the actual control efficiency in percent.
- (6) OTHER AIR CONTAMINANTS.** For all other air contaminant emissions from a facility, the emission inventory report shall include:
- (a) Identification of the air contaminant and its associated identifier number which is supplied to the source by the department.
  - (b) Annual, actual emissions of the air contaminant.
  - (c) Units of reported emissions.
  - (d) Method of determination of emissions.
- History:** Cr. Register, May, 1993, No. 449, eff. 6-1-93.