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

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(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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(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
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
Isopropyl benzene (Cumene)	98-82-8	13.2	51.3	103	399	5,899	24 Hr Avg	N/A
Isopropyl glycidyl 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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		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

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)
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

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)
		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
Cruformate	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
2,2-Dichloropropionic acid	75-99-0	3,554	14,600	34,762	122,517	20	Annual	N/A
		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
Trichloronitromethane (Chloropicrin)	76-06-2	0.0269	0.104	0.211	0.811	12	24 Hr Avg	N/A
Warfarin	81-81-2	0.0361	0.14	0.283	1.09	16.1	24 Hr Avg	N/A
		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)

CHANGES RELATED TO THE NEED TO REGULATE ADDITIONAL CONTAMINANTS (Section 63)

Note: Strike through language is proposed to be deleted from Board Order AM-34-02 as adopted on April 22, 2003. Underlined language is proposed to be added to Board Order AM-34-02 as adopted on April 22, 2003.

NR 445.13 Review of hazardous air contaminant requirements. (1) PERIODIC REPORTS. ~~(a) Beginning 3 years after the effective date of this section... [revisor inserts date] and no later than every 3 years thereafter, the~~ 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.

~~(b) Beginning 6 years after the effective date of this section... [revisor inserts date] and no later than every 6 years thereafter, the department, in consultation with the department of health and family services, shall prepare a report for the natural resources board that includes~~ The report shall include all of the following:

~~1.~~(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 ~~par. (a)~~ this subsection.

~~2.~~(b) Recommendations on the need for rule modifications.

~~3.~~(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) ~~The~~ Excepted 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) ~~The~~ Paragraph (b) notwithstanding, 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 Tables A, B or C of s. NR 445.07.

CHANGES RELATED TO EMISSIONS FROM COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES COMBUSTING FUEL OIL (Section 63)

Note: Strike through language is proposed to be deleted from Board Order AM-34-02 as adopted on April 22, 2003. Underlined language is proposed to be added to Board Order AM-34-02 as adopted on April 22, 2003.

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. If purchased prior to January 1, 2011, the Tier 2 particulate emission standard for nonroad engines as found in 40 CFR Parts 9, 86 and 89.

2. If purchased on or after January 1, 2011, a particulate emission standard of 0.01 grams per brake horsepower-hour.

(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 this paragraph~~ par. (a) Contact ~~the Environmental Studies Section of~~ 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) ~~An~~ 1. Except as provided for in par. (a)3., an owner or operator complying with an emission rate requirement in sub. (3)(a)1. or 2. shall achieve compliance and submit ~~all of the following information~~ 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 subd. a. to L. A copy of the information shall also be maintained at the location where the engine is operated.

a~~1~~. Company name, contact name, phone number and address of the owner or operator of the engine.

b~~2~~. The location of the engine.

c~~3~~. The name of the engine manufacturer.

d4. The make, model and serial number of the engine.

e~~5~~. The date the engine was manufactured or last rebuilt.

f~~6~~. The maximum rated horsepower of the engine.

g~~7~~. The date the control device was first put into operation

h~~8~~. The name of the control device manufacturer.

i~~9~~. The product or model name of the control device.

j~~10~~. The manufacturer's performance warranty for the control device expressed as a particulate matter emission rate in grams per brake horsepower-hour.

k~~11~~. 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~~12~~. The certifying agency for the control device.

2.~~(b)~~ Except as provided for in par. (a)3., ~~In addition to meeting par. (a)1. to 9.,~~ 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)~~(c)~~ 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. ~~to 12~~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)~~(d)~~ 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)~~(e)~~ 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)~~(f)~~ 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)~~ and (c)~~ 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)~~ and (e)~~ 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 ~~is~~ 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 ~~initial notification under~~ the submission deadline in sub. (4)~~(b)~~(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.

CHANGES RELATED TO EMISSIONS FROM AGRICULTURAL FACILITIES AND LIVESTOCK OPERATIONS (Sections 7a (new), 11, 33a (new), 39, 40 and 63)

Note: Strike through language is proposed to be deleted from Board Order AM-34-02 as adopted on April 22, 2003. Underlined language is proposed to be added to Board Order AM-34-02 as adopted on April 22, 2003.

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.

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.

NR 445.08(3)(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.

NR 445.08(3)(c) 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].

NR 445.08(6) COMPLIANCE DEADLINES, RECORDKEEPING AND REPORTING REQUIREMENTS. (a) ~~The~~ 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) ~~The~~ 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. ~~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)~~.

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 s. NR 445.08(1) and 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 s. NR 445.08(1) and 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).

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].

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].

MISCELLANEOUS AMENDMENTS TO BOARD ORDER AM-34-02
(REVISIONS TO NR 445)

(as of 04/22/03)

SECTION 63, PAGE 162 (original order)
CHANGE RELATED TO DIESEL GENERATORS

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

1. ~~If purchased prior to January 1, 2011, the~~ 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. ~~If purchased on or after January 1, 2011, a~~ 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.

Explanation for change: The proposed amendment to the requested modifications will properly align the exemption for engines meeting federal standards to the power ratings and compliance deadlines used in the existing and proposed federal standards.

SECTION 63, PAGE 160 (original order)
CHANGE RELATED TO AGRICULTURAL AND LIVESTOCK OPERATIONS

(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 ~~s. NR 445.08(1) and~~ 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 ~~s. NR 445.08(1) and~~ 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).

Explanation for change: The proposed amendment to the requested modifications will remove a reference to a requirement that is unnecessary for agricultural and livestock operations.

September 26, 2003

Mr. Scott Hassett, Secretary
Department of Natural Resources
State Natural Resources Building
101 South Webster Street
Madison, WI 53702

Dear Mr. Hassett:

RE: Clearinghouse Rule 02-097, Relating to the Control of Hazardous Air Contaminants

This letter follows up on the requests from earlier this year by the Senate Committee on Environment and Natural Resources and the Assembly Committee on Natural Resources for modifications in Clearinghouse Rule 02-097. This rule relates to the control of hazardous air contaminants under ch. NR 445. While the rule contains many desirable features, including the safe harbor and incidental emitters provisions, that we commend the Department for including, we have two main concerns with the rule that we ask the Department to address in modifications to it. These concerns relate to the procedures for determining the need to expand the list of hazardous air contaminants in the rule and the treatment of diesel generators in the rule.

Need to Regulate Additional Contaminants

Under s. 285.27 (2) (b), Stats., if the U.S. Environmental Protection Agency has not promulgated an emissions standard for a hazardous air contaminant under SEC. 112 of the Federal Clean Air Act, the Department of Natural Resources (DNR) may promulgate an emissions standard for the contaminant if the DNR "*finds the standard is needed to provide adequate protection for public health or welfare*" (emphasis added). Upon reviewing Clearinghouse Rule 02-097, we feel that the methodology used to identify chemicals to add to ch. NR 445 and to set emission limits for the added chemicals [is incomplete and thus

inadequate] [fails to comply with the legislative intent of s. 285.27 (2) (b) and is arbitrary]. In particular, for most of the chemicals on the lists in the rule, other than the list for incidental emitters, it appears that the principal criterion used by the Department in selecting a chemical and setting the emission limit is the toxicity of the chemical.

We feel that toxicity is only one of a number of considerations that needs to go into making a finding that a particular standard or limit is needed to provide adequate protection for public health or welfare. Other information that the Department should consider and document as part of its risk matrix in establishing an appropriate emission limit for a hazardous air contaminant emitted by a specific class of sources in Wisconsin include:

- Identification of the known sources in Wisconsin that release the contaminant and the magnitude of their releases, and identification of human (plant, and animal) populations susceptible to these releases.

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- Analysis of the expected exposure of susceptible populations to the contaminant and whether that exposure will result in the intake of amounts of the contaminant above applicable health or environmental standards.

- Evaluation of alternative control strategies, including alternative emission limits, for addressing exposures that exceed relevant health or environmental standards to identify the preferred alternative that is most practical and cost-effective.

We request that the Department apply this risk matrix in the current rule-making to all of the chemicals added to the lists in ch. NR 445 by the rule-making. To facilitate this effort, the

Department could group the chemicals in appropriate categories to establish priorities and to facilitate applying the risk matrix first to the chemicals that are felt to pose the most significant health concerns.

In addition, we request that the risk matrix be incorporated into s. NR 445.13, relating to review of hazardous air contaminant requirements, so that the matrix will be applied to any new chemical being considered for future addition to ch. NR 445. Section 445.13 should also be amended to state the policy that before additional chemicals, beyond those identified in Clearinghouse Rule 02-097, are added to ch. NR 445, all of the chemicals in the original version of ch. NR 445 and their associated emission limits will be reviewed under the risk matrix.

Diesel Generators

We feel that the provisions in s. NR 445.09 that establish fuel, control, and compliance requirements for "compression ignition internal combustion engines combusting fuel oil" (i.e., diesel generators) are unnecessary in light of existing and pending federal regulations of diesel fuels and engines and of engine test facilities. As such, we request that the rule be modified to remove s. NR 445.09 and related references to this section.

We appreciate the assistance of Department staff in providing information on the rule and the patience of the Department as we reviewed the rule.

Thank you for your consideration of the modifications described in this letter.

Sincerely,

Senator Neal Kedzie, Chair

Representative DuWayne Johnsrud, Chair

Senate Committee on Environment and Natural Resources

Assembly Committee on Natural Resources

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Note (in draft version of the letter): DNR "Green Sheet" discussion of concerns addressed in this letter—

- Process for listing new chemicals—pages 22 and 23.
- Diesel generators—pages 29 to 39.