

Table I-1
Annual National HDD Rulemaking Emissions for 1996 Base Year
(tons/year)

Tier 1	Tier 2	VOC	NO_x	CO	SO₂	PM₁₀	PM_{2.5}	NH₃	SOA
Fuel Comb. Elec. Utility	Coal	27,957	5,539,304	247,837	12,135,825	263,742	133,213	248	540
	Oil	2,766	95,835	10,044	415,966	4,794	4,216	1,607	79
	Gas	7,734	263,552	76,156	2,436	463	463	3,682	5
	Other	0	0	0	0	0	0	0	0
	Internal Combustion	9,746	138,480	49,465	55,858	17,490	17,397	214	30
		48,203	6,037,171	383,502	12,610,085	286,489	155,289	5,751	653
Fuel Comb. Industrial	Coal	6,386	510,383	109,030	1,324,252	71,829	23,353	133	123
	Oil	7,705	220,518	52,035	819,171	45,344	25,417	4,448	206
	Gas	48,288	1,201,709	338,400	558,875	43,845	40,461	38,903	49
	Other	40,146	128,704	350,076	140,405	76,922	62,461	1,181	1,521
	Internal Combustion	61,430	990,567	303,127	9,657	14,632	13,352	4,618	64
		163,955	3,051,882	1,152,669	2,852,360	252,571	165,044	49,283	1,963
Fuel Comb. Other	Commercial/Institutional Coal	861	34,761	13,583	183,179	15,133	6,402	7	17
	Commercial/Institutional Oil	3,099	92,562	18,942	338,899	11,498	4,936	1,942	69
	Commercial/Institutional Gas	11,425	240,246	57,759	9,697	7,746	6,854	744	8
	Misc. Fuel Comb. (Except Residential)	8,283	27,324	55,783	5,665	71,998	71,537	47	194
	Residential Wood	756,802	50,930	4,187,074	7,186	501,382	431,078	0	32,618
	Residential Other	37,241	783,162	259,940	131,398	22,535	15,152	4,705	414
		817,711	1,228,985	4,593,081	676,023	630,293	535,959	7,445	33,320
Chemical & Allied Product Mfg	Organic Chemicals	133,037	20,143	91,120	4,265	28,798	11,316	197	281
	Inorganic Chemicals	2,805	4,781	121,908	204,045	3,742	2,806	225	11
	Polymers & Resins	127,608	2,103	4,554	556	2,565	1,756	20	507
	Agricultural Chemicals	7,775	65,777	11,722	1,262	9,203	6,289	156,928	27
	Paints, Varnishes, Lacquers, Enamels	8,534	49	83	0	781	339	0	98
	Pharmaceuticals	8,176	57	477	359	205	109	0	18
	Other Chemicals	104,350	50,226	870,374	81,305	19,001	16,685	149	158
		392,285	143,135	1,100,238	291,793	64,295	39,301	157,519	1,099
Metals Processing	Non-Ferrous Metals Processing	18,083	10,406	441,807	284,192	37,298	25,372	5	97
	Ferrous Metals Processing	45,987	72,187	1,261,683	133,535	112,595	71,640	4,629	155
	Metals Processing NEC	9,975	3,245	42,756	17,407	21,028	15,163	66	57
		74,045	85,839	1,746,247	435,135	170,921	112,176	4,700	309
Petroleum & Related Industries	Oil & Gas Production	267,203	85,130	26,007	95,162	1,258	721	4	411
	Petroleum Refineries & Related Industries	220,253	43,638	361,818	243,216	17,138	11,572	33,860	410
	Asphalt Manufacturing	4,551	6,448	7,239	7,864	13,687	5,770	0	38
		492,006	135,216	395,064	346,242	32,083	18,063	33,864	858

Table I-1 (cont'd)

Tier 1	Tier 2	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	NH ₃	SOA
Other Industrial Processes	Agriculture, Food, & Kindred Products	119,863	4,436	3,737	4,262	61,258	21,379	3,509	133
	Textiles, Leather, & Apparel Products	15,106	1,044	236	283	918	534	1	3,020
	Wood, Pulp & Paper, & Publishing Products	141,297	80,054	392,049	102,919	78,818	54,894	199	15,212
	Rubber & Miscellaneous Plastic Products	55,836	117	71	1	3,736	2,180	6	303
	Mineral Products	31,848	316,700	186,033	254,413	169,564	92,635	18	228
	Machinery Products	11,000	2,404	788	263	7,660	2,786	24	93
	Electronic Equipment	1,877	38	1,529	1	26	22	0	20
	Transportation Equipment	3,819	234	383	1	208	163	0	41
	Construction	25	0	0	0	16	16	0	0
	Miscellaneous Industrial Processes	59,026	12,453	19,000	13,102	19,736	13,057	39,051	569
		439,697	417,482	603,827	375,244	341,941	187,667	42,808	19,619
Solvent Utilization	Degreasing	606,266	46	39	8	139	124	6	4,153
	Graphic Arts	302,682	704	107	44	896	872	2	3,292
	Dry Cleaning	156,617	9	763	1	5	4	5	827
	Surface Coating	2,413,997	1,613	833	402	4,403	3,816	45	28,068
	Other Industrial	99,662	143	365	318	382	331	1	434
	Nonindustrial	1,956,558	2	38	0	11	11	0	19,230
	Solvent Utilization NEC	2,584	7	53	1	4	4	0	0
		5,538,368	2,523	2,197	775	5,839	5,163	59	56,004
Storage & Transport	Bulk Terminals & Plants	209,676	117	3,680	2	58	58	37	338
	Petroleum & Petroleum Product Storage	172,936	290	3,996	81	491	443	786	1,426
	Petroleum & Petroleum Product Transport	122,082	99	257	0	19	17	1	2,034
	Service Stations: Stage I	311,554	0	0	0	0	0	0	6,092
	Service Stations: Stage II	397,053	25	46	1	2	0	0	7,612
	Service Stations: Breathing & Emptying	43,313	0	0	0	0	0	0	849
	Organic Chemical Storage	25,962	3,643	67,889	412	1,144	673	2	181
	Organic Chemical Transport	5,068	32	54	19	3	3	0	44
	Inorganic Chemical Storage	1,102	267	98	60	480	216	0	7
	Inorganic Chemical Transport	0	0	0	10	58	56	0	0
	Bulk Materials Storage	990	1,897	1,834	1,948	90,294	30,635	62	12
	Bulk Materials Transport	1	0	0	0	323	26	0	0
		1,289,737	6,370	77,854	2,532	92,871	32,127	889	18,596
Waste Disposal & Recycling	Incineration	51,491	50,581	406,639	28,991	89,133	45,070	295	314
	Open Burning	200,010	42,861	717,436	11,110	211,289	186,360	0	220
	POTW	49,329	290	188	22	14	13	83,963	31
	Industrial Waste Water	18,617	86	17	24	25	25	0	14
	TSDF	41,840	9	5	2	69	39	0	22
	Landfills	32,428	1,319	4,623	580	2,465	1,647	1	18
	Other	29,301	655	701	416	571	512	0	30
		423,017	95,801	1,129,608	41,146	303,566	233,666	84,259	648

Table I-1 (cont'd)

Tier 1	Tier 2	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	NH ₃	SOA
Highway Vehicles	Light-Duty Gas Vehicles & Motorcycles	2,599,449	2,914,892	29,062,241	127,290	55,614	32,276	156,094	15,857
	Light-Duty Gas Trucks	1,730,149	1,672,534	16,856,598	84,211	34,967	21,755	62,386	10,554
	Heavy-Duty Gas Vehicles	346,044	470,163	6,266,357	17,884	14,066	9,269	4,073	2,526
	Diesels	224,776	4,334,602	1,400,169	73,553	190,118	167,384	5,760	5,327
		4,900,419	9,392,191	53,585,364	302,938	294,764	230,684	228,312	34,264
Off-Highway	Non-Road Gasoline	2,567,854	128,479	21,150,028	24,305	73,142	67,290	950	18,776
	Non-Road Diesel	408,033	2,723,270	1,375,614	453,173	271,158	249,465	2,866	9,670
	Aircraft	177,467	166,726	949,344	11,306	39,551	27,893	3,370	4,206
	Marine Vessels	32,908	970,045	132,393	237,172	43,819	38,573	1,261	924
	Railroads	48,381	921,556	112,171	111,106	26,501	24,381	722	1,147
	Other	278	209,874	808,109	3,106	1,555	1,555	0	0
		3,234,921	5,119,950	24,527,658	840,169	455,726	409,157	9,170	34,722
Natural Sources	Biogenic	0	0	0	0	0	0	31,537	0
	Geogenic	13,792	0	0	0	5,306,671	796,001	0	0
		13,792	0	0	0	5,306,671	796,001	31,537	0
Miscellaneous	Agriculture & Forestry	42,494	3,414	795	138	4,903,801	951,983	4,106,713	0
	Other Combustion	644,712	396,503	9,338,962	14,579	1,087,978	889,867	0	438
	Catastrophic/Accidental Releases	5,107	0	0	0	0	0	0	4
	Health Services	493	6	0	0	0	0	0	0
	Cooling Towers	996	0	0	0	1,886	1,762	0	19
	Fugitive Dust	78	868	81	223	18,519,107	3,276,476	7	0
		693,880	400,791	9,339,838	14,940	24,512,773	5,120,088	4,106,719	461
TOTAL ALL TIERS		18,522,037	26,117,335	98,637,147	18,789,382	32,750,802	8,040,382	4,762,317	202,517