

Table VII-2
Annual National HDD Rulemaking Emissions for 2007 Base Case
(tons/year)

Tier 1	Tier 2	VOC	NO_x	CO	SO₂	PM₁₀	PM_{2.5}	NH₃	SOA
Fuel Comb. Elec. Utility	Coal	26,433	3,852,167	228,732	10,692,004	267,109	125,694	236	510
	Oil	344	14,937	2,249	61,868	635	559	360	10
	Gas	7,009	260,378	87,188	24,422	580	628	4,108	5
	Other	118	225	1	48	0	0	0	2
	Internal Combustion	1,421	126,450	155,054	1,258	59,258	27,341	0	1
		35,326	4,254,157	473,223	10,779,599	327,583	154,223	4,704	527
Fuel Comb. Industrial	Coal	6,360	485,689	107,672	1,307,558	67,051	20,508	125	123
	Oil	8,290	215,985	54,067	832,722	45,444	25,315	4,508	222
	Gas	47,536	1,293,548	372,359	571,097	47,098	43,674	41,293	49
	Other	40,716	129,694	357,648	143,136	76,798	62,160	1,225	1,557
	Internal Combustion	60,627	883,871	298,998	9,900	15,063	13,671	4,201	68
		163,530	3,008,786	1,190,745	2,864,413	251,455	165,328	51,352	2,019
Fuel Comb. Other	Commercial/Institutional Coal	1,077	41,946	16,704	223,780	18,520	7,818	8	21
	Commercial/Institutional Oil	2,503	72,923	15,038	283,546	9,841	4,158	1,574	57
	Commercial/Institutional Gas	13,484	278,075	69,070	11,924	9,328	8,229	920	9
	Misc. Fuel Comb. (Except Residential)	10,571	33,188	69,204	6,709	97,813	97,275	58	261
	Residential Wood	364,923	48,309	2,502,475	6,820	318,956	273,889	0	15,728
	Residential Other	32,658	682,170	232,783	101,151	19,953	13,099	3,695	334
		425,216	1,156,610	2,905,274	633,930	474,410	404,467	6,255	16,410
Chemical & Allied Product Mfg	Organic Chemicals	122,099	23,261	106,708	4,953	33,599	13,192	235	293
	Inorganic Chemicals	3,306	5,522	139,492	232,183	4,377	3,294	250	12
	Polymers & Resins	99,662	2,469	5,448	656	3,063	2,096	23	251
	Agricultural Chemicals	8,297	76,570	13,724	1,499	10,936	7,471	182,372	25
	Paints, Varnishes, Lacquers, Enamels	7,888	54	91	0	920	399	0	90
	Pharmaceuticals	6,564	69	548	438	243	129	0	14
	Other Chemicals	119,950	56,952	1,004,183	92,072	23,922	20,930	175	179
		367,766	164,898	1,270,196	331,801	77,060	47,511	183,056	864
Metals Processing	Non-Ferrous Metals Processing	19,922	11,460	479,967	314,479	38,061	24,973	5	108
	Ferrous Metals Processing	48,197	78,866	1,283,238	128,893	125,343	77,723	4,880	164
	Metals Processing NEC	11,115	3,705	47,443	20,157	26,216	18,426	77	61
		79,234	94,031	1,810,648	463,529	189,619	121,121	4,962	334
Petroleum & Related Industries	Oil & Gas Production	216,254	96,672	28,660	94,145	1,315	747	4	318
	Petroleum Refineries & Related Industries	97,311	48,850	423,551	270,181	19,380	13,029	38,087	170
	Asphalt Manufacturing	5,252	7,544	8,385	9,228	15,972	6,837	0	42
		318,817	153,067	460,596	373,555	36,667	20,614	38,091	531

Table VII-2 (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	135,569	4,809	4,192	4,892	70,671	24,905	4,201	151
	Textiles, Leather, & Apparel Products	16,671	1,136	259	322	1,056	615	1	3,326
	Wood, Pulp & Paper, & Publishing Products	76,701	98,939	494,163	129,139	93,108	65,360	245	11,203
	Rubber & Miscellaneous Plastic Products	40,122	155	98	2	5,002	2,915	7	192
	Mineral Products	35,807	334,700	208,706	279,744	189,224	103,481	21	258
	Machinery Products	12,816	2,720	942	313	9,744	3,517	25	110
	Electronic Equipment	2,224	42	1,643	2	32	26	1	24
	Transportation Equipment	4,841	297	540	1	289	231	0	52
	Construction	29	0	0	0	18	18	0	0
	Miscellaneous Industrial Processes	70,061	14,341	23,372	16,461	23,702	15,713	47,399	673
		394,841	457,140	733,916	430,876	392,845	216,780	51,901	15,988
Solvent Utilization	Degreasing	508,303	57	51	10	162	145	6	3,485
	Graphic Arts	314,773	809	120	50	945	919	3	3,384
	Dry Cleaning	137,659	10	750	1	5	4	5	740
	Surface Coating	2,055,342	1,910	1,103	475	5,367	4,637	52	22,946
	Other Industrial	127,166	162	426	341	493	427	1	528
	Nonindustrial	1,808,933	2	40	0	13	13	0	19,181
	Solvent Utilization NEC	2,974	8	61	1	4	4	0	0
		4,955,150	2,958	2,551	879	6,989	6,149	67	50,265
Storage & Transport	Bulk Terminals & Plants	262,822	147	4,126	2	69	69	46	418
	Petroleum & Petroleum Product Storage	120,569	348	4,510	93	571	519	974	1,272
	Petroleum & Petroleum Product Transport	87,093	121	319	0	24	22	2	1,363
	Service Stations: Stage I	376,924	0	0	0	0	0	0	7,369
	Service Stations: Stage II	219,496	26	49	1	2	0	0	4,077
	Service Stations: Breathing & Emptying	52,876	0	0	0	0	0	0	1,036
	Organic Chemical Storage	25,866	4,216	78,575	477	1,396	842	2	203
	Organic Chemical Transport	2,741	38	62	22	4	3	0	24
	Inorganic Chemical Storage	1,193	317	116	68	542	247	0	8
	Inorganic Chemical Transport	0	0	0	11	67	66	0	0
	Bulk Materials Storage	1,191	2,130	2,024	2,206	110,975	37,482	70	14
	Bulk Materials Transport	1	0	0	0	393	31	0	0
		1,150,773	7,343	89,781	2,880	114,044	39,280	1,094	15,785
Waste Disposal & Recycling	Incineration	59,141	60,878	460,320	31,053	99,305	50,301	391	360
	Open Burning	226,486	48,612	818,483	12,446	234,608	205,928	0	249
	POTW	12,598	324	224	28	17	16	102,572	9
	Industrial Waste Water	7,266	20	7	27	29	29	0	9
	TSDF	48,810	10	5	2	57	33	0	24
	Landfills	30,468	1,576	5,487	739	3,017	1,969	1	6
	Other	35,700	788	891	497	696	625	0	37
		420,468	112,207	1,285,417	44,791	337,729	258,901	102,965	694

Table VII-2 (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	1,044,051	1,105,562	15,781,283	9,354	37,318	17,523	139,196	6,369
	Light-Duty Gas Trucks	1,550,120	1,838,677	23,536,313	14,645	44,559	21,319	153,456	9,456
	Heavy-Duty Gas Vehicles	224,053	378,713	2,894,968	1,965	9,413	5,934	5,885	1,636
	Diesels	185,148	2,644,227	963,997	92,190	109,462	91,909	8,213	4,388
		3,003,372	5,967,179	43,176,561	118,155	200,753	136,685	306,749	21,849
Off-Highway	Non-Road Gasoline	1,598,064	176,470	23,472,252	2,248	81,537	75,014	959	11,695
	Non-Road Diesel	229,042	2,247,472	1,120,858	674,515	209,066	192,341	3,993	5,428
	Aircraft	206,616	197,066	1,205,472	13,335	41,013	28,924	4,437	4,896
	Marine Vessels	36,080	1,019,530	148,632	236,692	47,346	41,829	1,269	1,013
	Railroads	44,940	772,879	119,302	111,106	26,934	24,779	722	1,065
	Other	382	296,284	1,114,096	4,385	2,137	2,137	0	0
		2,115,124	4,709,700	27,180,612	1,042,281	408,033	365,024	11,379	24,098
Natural Sources	Biogenic	0	0	0	0	0	0	31,064	0
	Geogenic	13,792	0	0	0	5,306,671	796,001	0	0
		13,792	0	0	0	5,306,671	796,001	31,064	0
Miscellaneous	Agriculture & Forestry	41,210	3,267	761	132	4,430,802	858,119	4,106,951	0
	Other Combustion	767,549	473,196	12,360,602	17,728	1,393,909	1,151,216	0	524
	Catastrophic/Accidental Releases	5,107	0	0	0	0	0	0	4
	Health Services	562	7	0	0	0	0	0	0
	Cooling Towers	1,171	0	0	0	2,368	2,223	0	23
	Fugitive Dust	87	1,080	93	243	18,599,172	3,396,170	8	0
		815,685	477,550	12,361,456	18,104	24,426,251	5,407,728	4,106,960	550
TOTAL ALL TIERS		14,259,095	20,565,628	92,940,977	17,104,793	32,550,108	8,139,812	4,900,598	149,913