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Emergency Response
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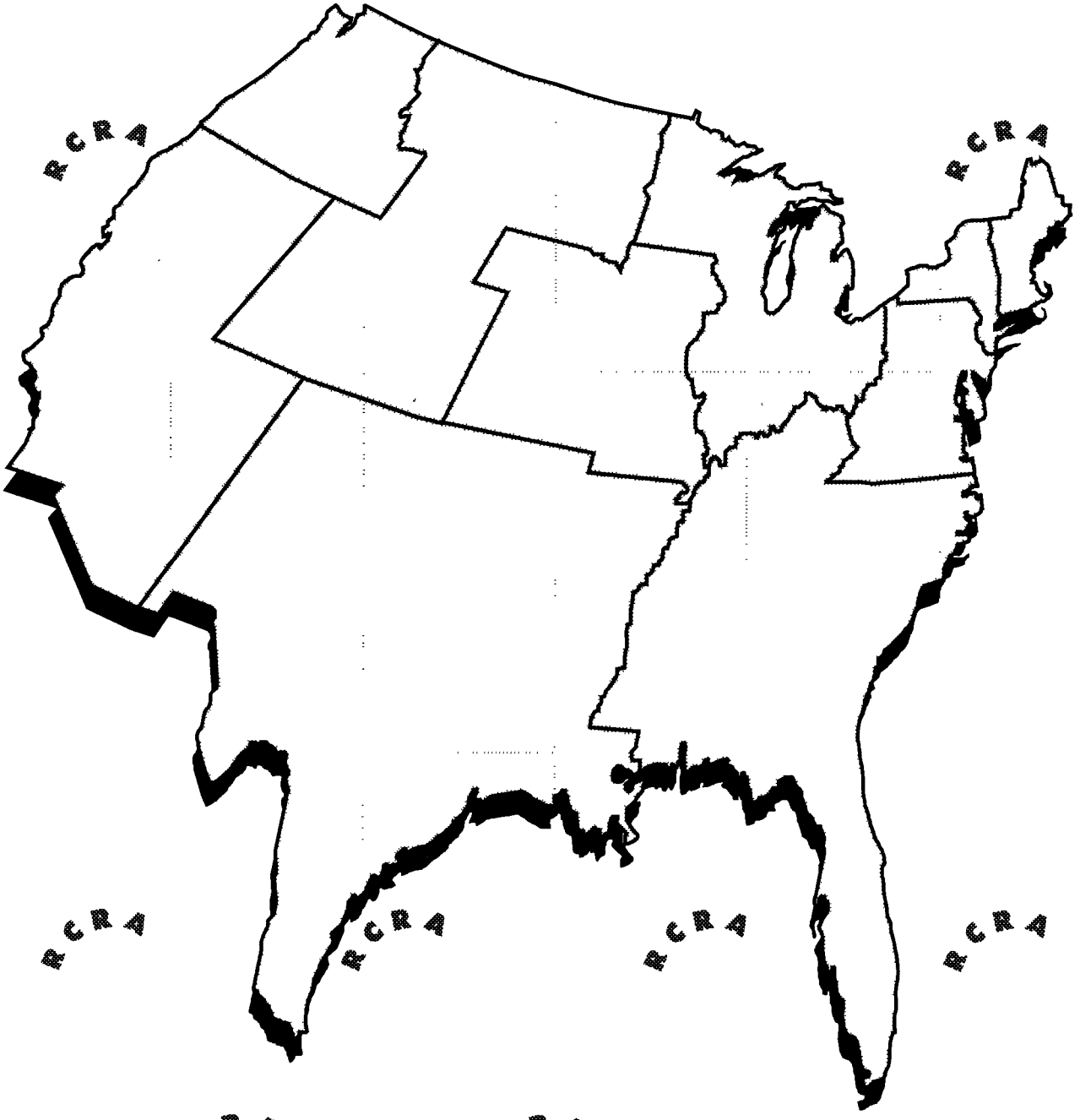
EPA

National Analysis

The National Biennial RCRA Hazardous Waste Report (Based on 1993 Data)



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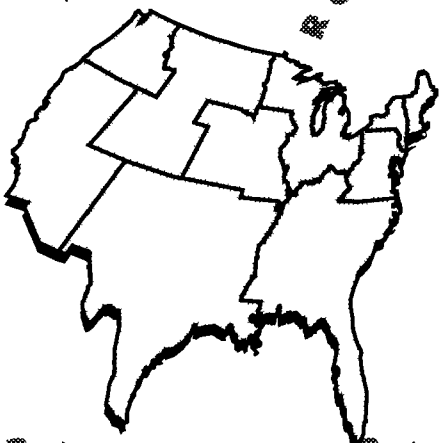
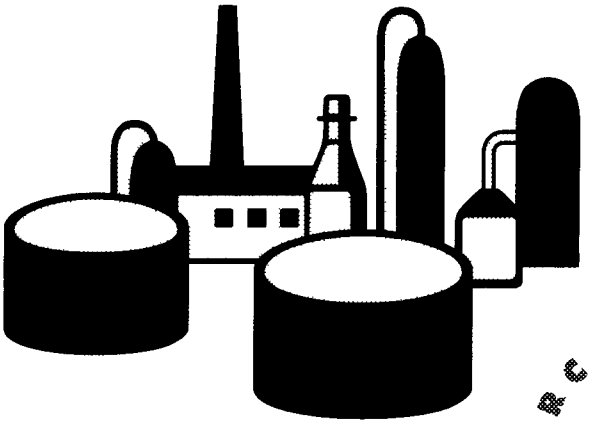
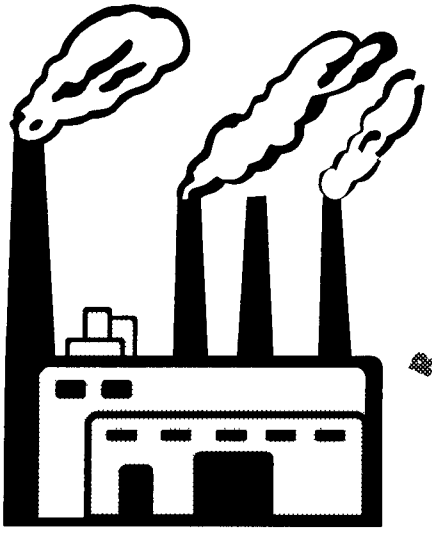
Executive Summary

The National Biennial RCRA Hazardous Waste Report (Based on 1993 Data)







EXECUTIVE SUMMARY

The United States Environmental Protection Agency (EPA), in cooperation with the States,[1] biennially collects information regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. The purpose of this report is to communicate the findings of EPA's 1993 Biennial Reporting System (BRS) data collection efforts to the public, government agencies, and the regulated community.[2] The report consists of six documents:

- Executive Summary--an overview of national hazardous waste generation and management practices;
- National Analysis--a detailed look at waste handling practices in the EPA Regions, the States and at the largest facilities in the nation, including quantities of generation, management, shipments and receipts, and interstate imports and exports, as well as counts of generators and managers;
- State Summary Analysis--two page overviews of the generation and management practices of individual States;
- State Detail Analysis--a detailed look at each State's waste handling practices, including overall totals for generation, management, and shipments and receipts, as well as totals for the largest fifty facilities;
- List of Large Quantity Generators--identifies every hazardous waste generator in the United States that reported itself to be a large quantity generator in 1993; and
- List of Treatment, Storage and Disposal Facilities--identifies every hazardous waste manager in the United States that reported itself to be a treatment, storage or disposal facility in 1993.

[1]The term "State" includes the District of Columbia, Puerto Rico, Guam, the Navajo Nation, the Trust Territories, and the Virgin Islands, in addition to the 50 United States.

[2]Some respondents have submitted Confidential Business Information (CBI) pursuant to 40 CFR 260.2(b). While not included in any public BRS database, CBI has been incorporated into this report wherever possible. Where CBI has been omitted to preserve confidentiality, a footnote has been provided.

RCRA HAZARDOUS WASTE GENERATION

In 1993, 24,362 large quantity generators produced 258 million tons of hazardous wastes regulated by RCRA.[3] This is an increase of 936 generators and a decrease of 47 million tons of waste compared to 1991. As identified in Exhibit 1, the largest hazardous waste generating States were Texas (63 million tons), Tennessee (34 million tons), Louisiana (32 million tons), Michigan (21 million tons), and New Jersey (18 million tons). Together, these States accounted for 65% of the national total.

In comparing 1993 data with those of earlier reports, it is important to note that many new wastes were captured by RCRA in 1990 with the promulgation of the Toxicity Characteristic (TC) Rule. The TC Rule added 25 new hazardous waste codes (D018-D043) and required more stringent analytical tests for the presence of toxic constituents in waste. These codes captured, at a minimum, 91 million tons of wastes not regulated before 1990. An additional 44 million tons were described by D018-D043 mixed with other waste codes. This suggests that, in 1993, the new toxicity characteristic wastes captured as much as 135 million tons of wastes not regulated before 1990. This compares to 162 million tons in 1991.

Hazardous waste generators are included in "The National Biennial RCRA Hazardous Waste Report" if they identified themselves as large quantity generators. A generator is a large quantity generator if it met the following federal criteria:

- The generator generated in any single month 1,000 kg (2,200 lbs. or 1.1 tons) or more of RCRA hazardous waste; or

- The generator generated in any single month, or accumulated at any time, 1 kg (2.2 lbs) of RCRA acute hazardous waste; or

- The generator generated, or accumulated, at any time more than 100 kg (220 lbs) of spill cleanup material contaminated with RCRA acute hazardous waste.

[3]This quantity only includes waste managed in treatment units subject to RCRA permitting standards or transportation regulations. Hazardous waste managed in units exempt from RCRA permitting standards, such as treatment systems permitted by the National Pollutant Discharge Elimination System (NPDES), is not included in this report.

It is important to note that the large quantity generators identified in this report have been included on the basis of the best available and most current information provided electronically to the EPA by the States. Both the EPA and the States have made significant efforts to ensure the accuracy of these data. However, the large quantity generator counts may include some generators that met lower, State-defined thresholds for large quantity generators. The EPA and the States endeavor to control for variation in State programs, but it is not always possible to distinguish generators that the federal threshold determines to be large quantity generators from generators that a State threshold determines to be large quantity generators. The EPA and the States also endeavor to ensure that only federally regulated wastes are counted in the determination of federal large quantity generators, but the large quantity generator counts may include generators that, when determining whether they were large quantity generators, counted wastes regulated only by their States or wastes that are exempt from federal regulation.

Because of differences between state and federal criteria for large quantity generators and because large quantity generator status is based on monthly generation amounts but the amount reported is for the report year, EPA separated those generators that reported as large quantity generators into three categories for data quality purposes:

- Generators reporting 13.2 or more tons of RCRA hazardous waste generation.

  A generator that reports more than 13.2 tons (12 months x 1.1 tons) of annual hazardous waste generation must be a large quantity generator, because the generator must have generated at least 1.1 tons in at least one month.

- Generators reporting 1.1 or more tons but less than 13.2 tons of RCRA hazardous waste generation.

  A generator that reports less than 13.2 tons in a year may not be a large quantity generator, because they may have generated less than 1.1 tons in every month.

- Generators reporting less than 1.1 tons of RCRA hazardous waste generation.

  A generator that reports less than 1.1 tons in a year is not a large quantity generator, because they did not generate 1.1 tons in any month.

Of the 24,362 generators that identified themselves as large quantity generators, there are 14,284 generators that generated more than 13.2 tons in 1993, 8,050 that generated between 1.1 and 13.2 tons, and 2,027 that generated less than 1.1 tons. 5.8 million tons of RCRA acute hazardous waste was generated by 2,077 of the 24,362 large quantity generators.

RCRA HAZARDOUS WASTE MANAGEMENT

In 1993, 2,584 treatment, storage, or disposal facilities (TSDs) subject to RCRA permitting standards managed 235 million tons of hazardous waste. This represents a 1,278 facility decrease in the number of TSDs and a 60 million ton decrease in the amount of waste managed as compared to 1991. As identified in Exhibit 2, the States managing the largest quantities of hazardous wastes were Texas (53 million tons), Tennessee (34 million tons), Louisiana (31 million tons), Michigan (21 million tons), and New Jersey (18 million tons). Together, these States accounted for 67% of the national management total.

Ninety-four (94) percent of the national management total was wastewater management (i.e., management in aqueous treatment units, neutralization tanks, underground injection wells, or other wastewater management systems). The majority (70.6%) of the national total was managed in aqueous treatment units. One hundred and three (103) million tons were managed in aqueous organic treatment units, 6 million tons in aqueous inorganic treatment units, and 57 million tons in both inorganic and organic aqueous treatment units.

Land disposal accounts for 11.6% of the management total. Nationwide, 24 million tons of hazardous wastes were disposed in underground injection wells, 2 million tons were disposed in landfills, 276 thousand tons were managed in surface impoundments, and 159 thousand tons were managed by land treatment (land farming).

Recovery operations account for 3.5% of the national management total. Facilities reported that 5.6 million tons were recovered by other methods such as acid regeneration, waste oil recovery, and non-solvent organic recovery, 1.3 million tons were managed in fuel blending units, 673 thousand tons were managed in solvent recovery units, and 523 thousand tons were managed in metals recovery units.

Thermal treatment accounts for 1.6% of the national management total. A total of 2 million tons were incinerated, while facilities reused 1.7 million tons as fuel in boilers or industrial furnaces.

RCRA HAZARDOUS WASTE SHIPMENTS AND RECEIPTS

In 1993, 23,964 shippers reported shipping a total of 17 million tons of hazardous waste, of which 7 million tons were shipped interstate. This is a decrease of 36 shippers and an increase of 4 million tons of waste compared to 1991. The States that shipped (in or out of State) the largest quantities of wastes were Michigan (4.2 million tons), Texas (3.4 million tons), and California (1.7 million tons). The States that received the largest quantities of waste, from both in or out of State, were California (1.4 million tons), Texas (860 thousand tons) and Ohio (857 thousand tons). The largest importers of waste were Ohio (423 thousand tons), Indiana (340 thousand tons), and Louisiana (326 thousand tons). The largest exporters were Michigan (1.5 million tons), California (1.2 million tons), and Texas (306 thousand tons).

Exhibit 1 Quantity of RCRA Hazardous Waste Generated, and Number of Hazardous Waste Generators, by State, 1993

STATE	HAZARDOUS WASTE QUANTITY			HAZARDOUS WASTE GENERATORS		
	RANK	TONS GENERATED	PERCENTAGE	RANK	NUMBER OF GENERATORS	PERCENTAGE
ALABAMA	26	779,645	0.3	26	295	1.2
ALASKA	50	5,534	0.0	43	75	0.3
ARIZONA	41	46,913	0.0	27	233	1.0
ARKANSAS	25	794,801	0.3	32	162	0.7
CALIFORNIA	7	14,055,553	5.4	3	1,872	7.7
COLORADO	23	1,079,332	0.4	35	146	0.6
CONNECTICUT	21	1,169,205	0.5	17	441	1 8
DELAWARE	42	22,173	0.0	44	71	0.3
DISTRICT OF COLUMBIA	55	628	0.0	52	15	0.1
FLORIDA	34	213,888	0.1	18	438	1.8
GEORGIA	24	921,076	0.4	18	438	1.8
GUAM	51	2,453	0.0	53	14	0.1
HAWAII	53	1,774	0.0	48	44	0.2
IDAHO	20	1,255,865	0.5	47	57	0.2
ILLINOIS	8	12,494,369	4.8	6	1,238	5.1
INDIANA	14	1,751,572	0.7	10	683	2.8
IOWA	37	158,908	0.1	28	196	0.8
KANSAS	12	3,144,665	1.2	25	297	1.2
KENTUCKY	31	397,488	0.2	16	472	1.9
LOUISIANA	3	31,715,905	12.3	23	347	1.4
MAINE	47	8,651	0.0	34	148	0.6
MARYLAND	33	308,621	0.1	14	566	2.3
MASSACHUSETTS	36	163,037	0.1	13	569	2.3
MICHIGAN	4	21,014,255	8.1	8	789	3.2
MINNESOTA	11	5,993,221	2.3	24	300	1.2
MISSISSIPPI	13	1,882,053	0.7	31	163	0.7
MISSOURI	28	528,922	0.2	20	415	1.7
MONTANA	44	11,282	0.0	45	60	0.2
NAVAJO NATION	56	245	0.0	54	9	0.0
NEBRASKA	40	90,471	0.0	40	96	0.4
NEVADA	45	10,773	0.0	41	82	0.3
NEW HAMPSHIRE	43	17,249	0.0	33	158	0.6
NEW JERSEY	5	17,977,002	7.0	1	3,120	12.8
NEW MEXICO	35	176,409	0.1	45	60	0.2
NEW YORK	16	1,498,421	0.6	2	2,036	8.4
NORTH CAROLINA	30	447,718	0.2	11	623	2.6
NORTH DAKOTA	27	594,815	0.2	51	16	0.1
OHIO	15	1,739,928	0.7	4	1,524	6.3
OKLAHOMA	22	1,145,732	0.4	29	193	0.8
OREGON	17	1,392,152	0.5	30	184	0.8
PENNSYLVANIA	9	9,441,256	3.7	7	1,215	5.0
PUERTO RICO	18	1,373,639	0.5	36	109	0.4
RHODE ISLAND	46	10,169	0.0	39	102	0.4
SOUTH CAROLINA	32	310,399	0.1	21	388	1.6
SOUTH DAKOTA	54	767	0.0	50	24	0.1
TENNESSEE	2	33,937,638	13.1	15	518	2.1
TEXAS	1	63,435,688	24.6	5	1,286	5.3
TRUST TERRITORIES	49	6,045	0.0	55	3	0.0
UTAH	38	104,623	0.0	37	106	0.4
VERMONT	48	8,337	0.0	41	82	0.3
VIRGIN ISLANDS	52	2,049	0.0	56	2	0.0
VIRGINIA	39	96,850	0.0	22	379	1.6
WASHINGTON	6	14,397,985	5.6	9	766	3.1
WEST VIRGINIA	10	8,471,643	3.3	37	106	0.4
WISCONSIN	29	522,523	0.2	12	605	2.5
WYOMING	19	1,316,689	0.5	49	26	0.1
TOTAL		**258,449,001**	**100.0**		**24,362**	**100.0**

Note: Columns may not sum due to rounding.

Exhibit 2 Quantity of RCRA Hazardous Waste Managed and Number of TSDs, by State, 1993

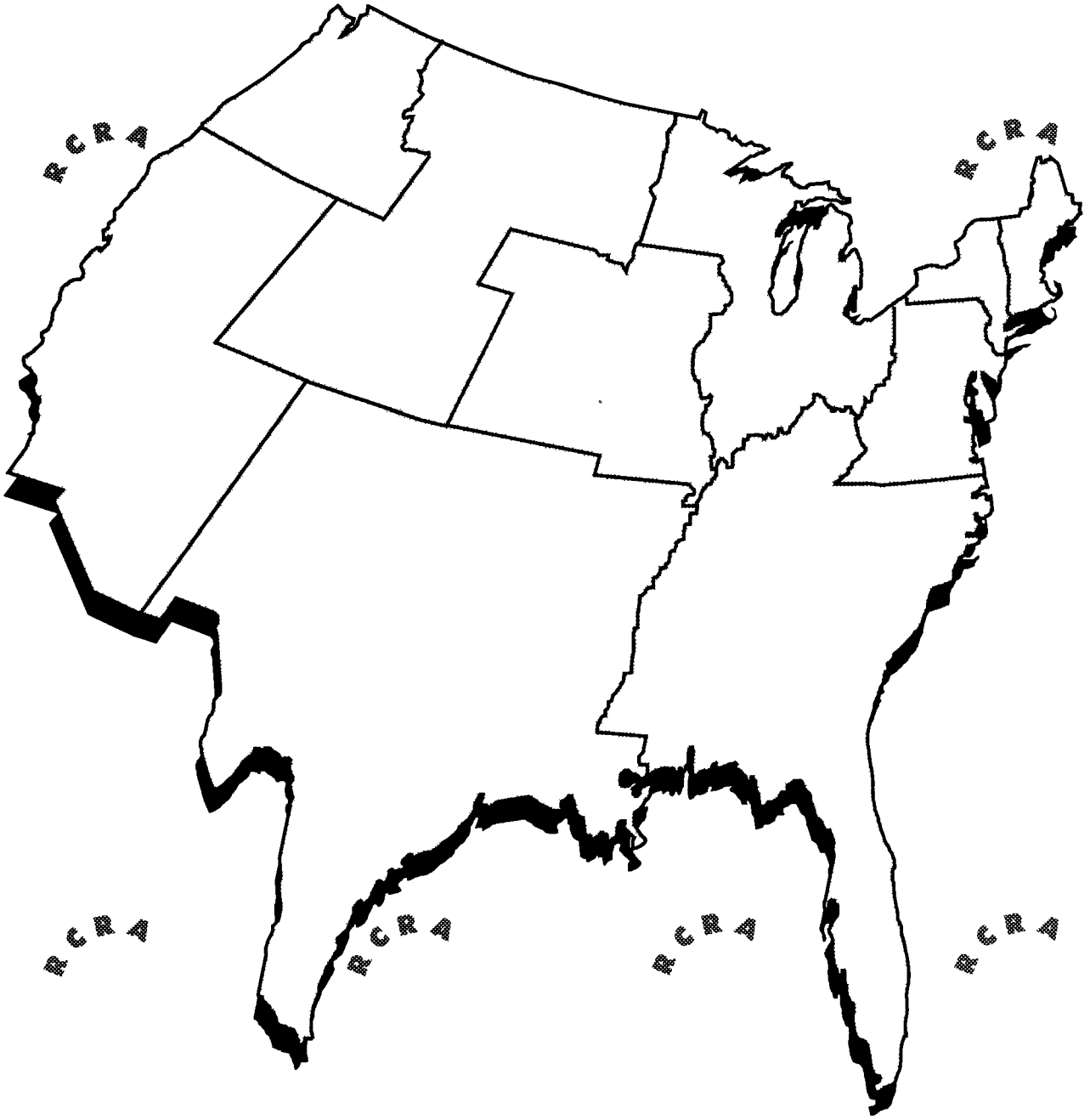
STATE	RCRA HAZARDOUS WASTE QUANTITY[1]			TSD FACILITIES		
	RANK	TONS MANAGED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	26	544,602	0.2	19	49	1.9
ALASKA	51	55	0.0	43	8	0.3
ARIZONA	41	32,681	0.0	24	32	1.2
ARKANSAS	22	804,914	0.3	34	24	0.9
CALIFORNIA	6	12,899,741	5.4	1	253	9.7
COLORADO	23	743,526	0.3	24	32	1.2
CONNECTICUT	36	87,080	0.0	16	56	2.2
DELAWARE	44	1,857	0.0	43	8	0.3
DISTRICT OF COLUMBIA	52	0	0.0	54	1	0.0
FLORIDA	32	134,387	0.1	12	68	2.6
GEORGIA	21	825,522	0.4	15	58	2.2
GUAM	52	0	0.0	51	2	0.1
HAWAII	48	591	0.0	47	6	0.2
IDAHO	20	935,049	0.4	41	9	0.3
ILLINOIS	7	11,446,050	4.9	5	134	5.2
INDIANA	13	1,972,197	0.8	7	103	4.0
IOWA	33	130,002	0.1	23	34	1.3
KANSAS	12	3,202,245	1.4	17	54	2.1
KENTUCKY	29	221,701	0.1	20	42	1.6
LOUISIANA	3	31,468,974	13.4	13	67	2.6
MAINE	47	908	0.0	32	25	1.0
MARYLAND	30	166,232	0.1	30	27	1.0
MASSACHUSETTS	39	45,607	0.0	24	32	1.2
MICHIGAN	4	20,686,504	8.8	4	136	5.3
MINNESOTA	11	6,015,307	2.6	18	50	1.9
MISSISSIPPI	14	1,901,716	0.8	36	22	0.9
MISSOURI	27	516,407	0.2	8	91	3.5
MONTANA	45	1,695	0.0	41	9	0.3
NAVAJO NATION	52	0	0.0	56	0	0.0
NEBRASKA	40	45,458	0.0	37	19	0.7
NEVADA	37	82,601	0.0	43	8	0.3
NEW HAMPSHIRE	52	0	0.0	51	2	0.1
NEW JERSEY	5	17,557,748	7.5	3	158	6.1
NEW MEXICO	31	165,968	0.1	39	15	0.6
NEW YORK	19	1,057,801	0.5	9	82	3.1
NORTH CAROLINA	28	336,975	0.1	11	73	2.8
NORTH DAKOTA	24	593,349	0.3	43	8	0.3
OHIO	15	1,697,197	0.7	6	117	4.5
OKLAHOMA	18	1,156,392	0.5	28	31	1.2
OREGON	25	568,633	0.2	40	11	0.4
PENNSYLVANIA	9	9,215,329	3.9	9	81	3.1
PUERTO RICO	16	1,338,211	0.6	20	42	1.6
RHODE ISLAND	42	11,118	0.0	37	19	0.7
SOUTH CAROLINA	17	1,184,248	0.5	32	25	1.0
SOUTH DAKOTA	52	0	0.0	50	3	0.1
TENNESSEE	2	33,996,659	14.5	28	31	1.2
TEXAS	1	52,506,535	22.4	2	234	9.1
TRUST TERRITORIES	43	5,808	0.0	51	2	0.1
UTAH	34	103,495	0.0	31	26	1.0
VERMONT	46	994	0.0	48	5	0.2
VIRGIN ISLANDS	50	90	0.0	54	1	0.0
VIRGINIA	38	81,550	0.0	14	59	2.3
WASHINGTON	8	10,159,540	4.3	22	40	1.5
WEST VIRGINIA	10	8,238,991	3.5	35	23	0.9
WISCONSIN	35	94,955	0.0	24	32	1.2
WYOMING	49	520	0.0	48	5	0.2
TOTAL		**234,864,033**	**100.0**		**2,584**	**100.0**

[1]Quantity managed only by storage is excluded.

Note: Columns may not sum due to rounding.

National Analysis

The National Biennial RCRA Hazardous Waste Report (Based on 1993 Data)



National Biennial RCRA Hazardous Waste Report

The United States Environmental Protection Agency (EPA), in cooperation with individual States,[1] biennially collects information regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. The purpose of this report is to communicate the findings of EPA's 1993 Biennial Reporting System (BRS) data collection efforts to the public, government agencies, and the regulated community.[2]

1.0 WASTE GENERATION

This section presents a series of exhibits describing RCRA hazardous waste generation in 1993. Nationwide, 24,362 large quantity generators (LQGs) produced 258 million tons[3] of hazardous wastes regulated by RCRA.[4] Throughout this report, the term RCRA hazardous waste refers to solid waste assigned a federal hazardous waste code and regulated by RCRA, either because it was managed in a unit subject to RCRA permitting standards or because it was shipped and subject to RCRA transportation requirements. Individual States may choose to regulate additional wastes not identified as hazardous by EPA. Hazardous wastes assigned only a State hazardous waste code are not included in this report. Similarly, hazardous wastes managed only in units subject to State permitting standards, or wastes that are managed only in units exempt from RCRA permitting standards, are not included in this report.

Exhibits 1.1, 1.2, and 1.3 present the quantity of RCRA hazardous waste generated and number of LQGs in each EPA Region in 1993. Three Regions produced 70% of the 258 million tons generated nationwide.

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[1]The term "State" includes the District of Columbia, Puerto Rico, Guam, the Navajo Nation, the Trust Territories, and the Virgin Islands.

[2]Some respondents have submitted confidential business information (CBI) pursuant to 40 CFR 260.2(b). While not included in any public BRS database, CBI has been incorporated into this report wherever possible. Where CBI has been omitted to preserve confidentiality, a footnote has been provided.

[3]1 Ton = 2,000 pounds.

[4]This quantity only includes waste managed in treatment units subject to RCRA permitting standards or subject to RCRA transportation regulations. Hazardous waste managed in units exempt from RCRA permitting standards, such as units permitted by the National Pollutant Discharge Elimination System (NPDES), were not included in this report.

Exhibit 1.1 Number and Percentage of RCRA Hazardous Waste Generators and Total RCRA Hazardous Waste Quantity Generated, by EPA Region, 1993

EPA REGION	HAZARDOUS WASTE QUANTITY		LARGE QUANTITY GENERATORS	
	TONS GENERATED	PERCENTAGE	NUMBER	PERCENTAGE
1	1,376,647	0.5	1,500	6.2
2	20,851,111	8.1	5,267	21.6
3	18,341,172	7.1	2,352	9.7
4	38,889,905	15.1	3,335	13.7
5	43,515,867	16.8	5,139	21.1
6	97,268,534	37.6	2,048	8.4
7	3,922,966	1.5	1,004	4.1
8	3,107,508	1.2	378	1.6
9	14,123,755	5.5	2,257	9.3
10	17,051,536	6.6	1,082	4.4
TOTAL	**258,449,001**	**100.0**	**24,362**	**100.0**

Exhibit 1.2 Number and Percentage of RCRA Hazardous Waste Generators and Total RCRA Hazardous Waste Quantity Generated in Each EPA Region, by Highest Quantity Generated, 1993

EPA REGION	HAZARDOUS WASTE QUANTITY		LARGE QUANTITY GENERATORS	
	TONS GENERATED	PERCENTAGE	NUMBER	PERCENTAGE
6	97,268,534	37.6	2,048	8.4
5	43,515,867	16.8	5,139	21.1
4	38,889,905	15.1	3,335	13.7
2	20,851,111	8.1	5,267	21.6
3	18,341,172	7.1	2,352	9.7
10	17,051,536	6.6	1,082	4.4
9	14,123,755	5.5	2,257	9.3
7	3,922,966	1.5	1,004	4.1
8	3,107,508	1.2	378	1.6
1	1,376,647	0.5	1,500	6.2
TOTAL	**258,449,001**	**100.0**	**24,362**	**100.0**

Note: Columns for these two exhibits may not sum due to rounding.

Exhibit 1.3 **Number and Percentage of RCRA Hazardous Waste Generators and Total RCRA Hazardous Waste Quantity Generated in Each EPA Region, by Highest Number of Generators, 1993**

EPA REGION	LARGE QUANTITY GENERATORS		HAZARDOUS WASTE QUANTITY	
	NUMBER	PERCENTAGE	TONS GENERATED	PERCENTAGE
2	5,267	21.6	20,851,111	8.1
5	5,139	21.1	43,515,867	16.8
4	3,335	13.7	38,889,905	15.1
3	2,352	9.7	18,341,172	7.1
9	2,257	9.3	14,123,755	5.5
6	2,048	8.4	97,268,534	37.6
1	1,500	6.2	1,376,647	0.5
10	1,082	4.4	17,051,536	6.6
7	1,004	4.1	3,922,966	1.5
8	378	1.6	3,107,508	1.2
TOTAL	**24,362**	**100.0**	**258,449,001**	**100.0**

Note: Columns may not sum due to rounding.

Region 6 generated 97 million tons, Region 5 generated 44 million tons, and Region 4 generated 38 million tons. Overall, 24,362 facilities identified themselves as large quantity generators (LQGs)[5] in 1993. The EPA Regions with the largest numbers of LQGs were Region 2 (5,267), Region 5 (5,139), and Region 4 (3,335). These Regions account for 56% of the total number of LQGs.

Region 6 generated the largest amount of hazardous waste (97 million tons or 38%) while ranking sixth in number of LQGs (2,048). Region 2 had the highest number of LQGs (5,267) and ranked fourth in the amount of hazardous waste generated (21 million tons or 8%). Region 8 had the smallest number of LQGs (378) and Region 1 generated the least amount of hazardous waste (1 million tons).

As shown in Exhibits 1.4, 1.5, and 1.6, the largest hazardous waste generating States were Texas (63 million tons), Tennessee (34 million tons), Louisiana (32 million tons), Michigan (21 million tons), and New Jersey (18 million tons). Together, these States account for 65% of the national total quantity generated. The States with the most LQGs were New Jersey (3,120), New York (2,036), California (1,872), Ohio (1,524), and Texas (1,286). These States account for 41% of the total number of LQGs.

As shown in Exhibit 1.7, the largest 50 generators account for 82% (212 million tons) of the national total. Large generators within the above mentioned States (i.e., Texas, Tennessee, Louisiana, Michigan, and New Jersey) account for the majority of the States' generation totals. Of the 50 generators, 20 are located in Texas. These 20 facilities account for 86% of Texas' total. One Tennessee site, Tennessee Eastman Co., accounts for 99% of Tennessee's total. Six Louisiana facilities account for 91% of the State's total. In Michigan, Dow Chemical Co. accounts for 76% of the State's total. Finally, E.I. DuPont Chambers Works accounts for 95% of New Jersey's total.

[5] EPA lists all reported large quantity generators in the "The National Biennial RCRA Hazardous Waste Report (Based on 1993 Data): List of Large Quantity Generators in the United States."

Exhibit 1.4 **Quantity of RCRA Hazardous Waste Generated, and Number of Hazardous Waste Generators, by State, 1993**

STATE	HAZARDOUS WASTE QUANTITY			HAZARDOUS WASTE GENERATORS		
	RANK	TONS GENERATED	PERCENTAGE	RANK	NUMBER OF GENERATORS	PERCENTAGE
ALABAMA	26	779,645	0.3	26	295	1.2
ALASKA	50	5,534	0.0	43	75	0.3
ARIZONA	41	46,913	0.0	27	233	1 .0
ARKANSAS	25	794,801	0.3	32	162	0.7
CALIFORNIA	7	14,055,553	5.4	3	1,872	7.7
COLORADO	23	1,079,332	0.4	35	146	0.6
CONNECTICUT	21	1,169,205	0.5	17	441	1.8
DELAWARE	42	22,173	0.0	44	71	0.3
DISTRICT OF COLUMBIA	55	628	0.0	52	15	0.1
FLORIDA	34	213,888	0.1	18	438	1.8
GEORGIA	24	921,076	0.4	18	438	1.8
GUAM	51	2,453	0.0	53	14	0.1
HAWAII	53	1,774	0.0	48	44	0.2
IDAHO	20	1,255,865	0.5	47	57	0.2
ILLINOIS	8	12,494,369	4.8	6	1,238	5.1
INDIANA	14	1,751,572	0.7	10	683	2.8
IOWA	37	158,908	0.1	28	196	0.8
KANSAS	12	3,144,665	1.2	25	297	1.2
KENTUCKY	31	397,488	0.2	16	472	1.9
LOUISIANA	3	31,715,905	12.3	23	347	1.4
MAINE	47	8,651	0.0	34	148	0.6
MARYLAND	33	308,621	0.1	14	566	2.3
MASSACHUSETTS	36	163,037	0.1	13	569	2.3
MICHIGAN	4	21,014,255	8.1	8	789	3.2
MINNESOTA	11	5,993,221	2.3	24	300	1.2
MISSISSIPPI	13	1,882,053	0.7	31	163	0.7
MISSOURI	28	528,922	0.2	20	415	1.7
MONTANA	44	11,282	0.0	45	60	0.2
NAVAJO NATION	56	245	0.0	54	9	0.0
NEBRASKA	40	90,471	0.0	40	96	0.4
NEVADA	45	10,773	0.0	41	82	0.3
NEW HAMPSHIRE	43	17,249	0.0	33	158	0.6
NEW JERSEY	5	17,977,002	7.0	1	3,120	12.8
NEW MEXICO	35	176,409	0.1	45	60	0.2
NEW YORK	16	1,498,421	0.6	2	2,036	8.4
NORTH CAROLINA	30	447,718	0.2	11	623	2.6
NORTH DAKOTA	27	594,815	0.2	51	16	0.1
OHIO	15	1,739,928	0.7	4	1,524	6.3
OKLAHOMA	22	1,145,732	0.4	29	193	0.8
OREGON	17	1,392,152	0.5	30	184	0.8
PENNSYLVANIA	9	9,441,256	3.7	7	1,215	5.0
PUERTO RICO	18	1,373,639	0.5	36	109	0.4
RHODE ISLAND	46	10,169	0.0	39	102	0.4
SOUTH CAROLINA	32	310,399	0.1	21	388	1.6
SOUTH DAKOTA	54	767	0.0	50	24	0.1
TENNESSEE	2	33,937,638	13.1	15	518	2.1
TEXAS	1	63,435,688	24.6	5	1,286	5.3
TRUST TERRITORIES	49	6,045	0.0	55	3	0.0
UTAH	38	104,623	0.0	37	106	0.4
VERMONT	48	8,337	0.0	41	82	0.3
VIRGIN ISLANDS	52	2,049	0.0	56	2	0.0
VIRGINIA	39	96,850	0.0	22	379	1.6
WASHINGTON	6	14,397,985	5.6	9	766	3.1
WEST VIRGINIA	10	8,471,643	3.3	37	106	0.4
WISCONSIN	29	522,523	0.2	12	605	2.5
WYOMING	19	1,316,689	0.5	49	26	0.1
TOTAL		**258,449,001**	**100.0**		**24,362**	**100.0**

Note: Columns may not sum due to rounding.

Exhibit 1.5 **Rank Ordering of States Based on Quantity of RCRA Hazardous Waste Generated, and Number of Hazardous Waste Generators, 1993**

STATE	HAZARDOUS WASTE QUANTITY			HAZARDOUS WASTE GENERATORS		
	RANK	TONS GENERATED	PERCENTAGE	RANK	NUMBER OF GENERATORS	PERCENTAGE
TEXAS	1	63,435,688	24.6	5	1,286	5.3
TENNESSEE	2	33,937,638	13.1	15	518	2.1
LOUISIANA	3	31,715,905	12.3	23	347	1.4
MICHIGAN	4	21,014,255	8.1	8	789	3.2
NEW JERSEY	5	17,977,002	7.0	1	3,120	12.8
WASHINGTON	6	14,397,985	5.6	9	766	3.1
CALIFORNIA	7	14,055,553	5.4	3	1,872	7.7
ILLINOIS	8	12,494,369	4.8	6	1,238	5.1
PENNSYLVANIA	9	9,441,256	3.7	7	1,215	5.0
WEST VIRGINIA	10	8,471,643	3.3	37	106	0.4
MINNESOTA	11	5,993,221	2.3	24	300	1.2
KANSAS	12	3,144,665	1.2	25	297	1.2
MISSISSIPPI	13	1,882,053	0.7	31	163	0.7
INDIANA	14	1,751,572	0.7	10	683	2.8
OHIO	15	1,739,928	0.7	4	1,524	6.3
NEW YORK	16	1,498,421	0.6	2	2,036	8.4
OREGON	17	1,392,152	0.5	30	184	0.8
PUERTO RICO	18	1,373,639	0.5	36	109	0.4
WYOMING	19	1,316,689	0.5	49	26	0.1
IDAHO	20	1,255,865	0.5	47	57	0.2
CONNECTICUT	21	1,169,205	0.5	17	441	1.8
OKLAHOMA	22	1,145,732	0.4	29	193	0.8
COLORADO	23	1,079,332	0.4	35	146	0.6
GEORGIA	24	921,076	0.4	18	438	1.8
ARKANSAS	25	794,801	0.3	32	162	0.7
ALABAMA	26	779,645	0.3	26	295	1.2
NORTH DAKOTA	27	594,815	0.2	51	16	0.1
MISSOURI	28	528,922	0.2	20	415	1.7
WISCONSIN	29	522,523	0.2	12	605	2.5
NORTH CAROLINA	30	447,718	0.2	11	623	2.6
KENTUCKY	31	397,488	0.2	16	472	1.9
SOUTH CAROLINA	32	310,399	0.1	21	388	1.6
MARYLAND	33	308,621	0.1	14	566	2.3
FLORIDA	34	213,888	0.1	18	438	1.8
NEW MEXICO	35	176,409	0.1	45	60	0.2
MASSACHUSETTS	36	163,037	0.1	13	569	2.3
IOWA	37	158,908	0.1	28	196	0.8
UTAH	38	104,623	0.0	37	106	0.4
VIRGINIA	39	96,850	0.0	22	379	1.6
NEBRASKA	40	90,471	0.0	40	96	0.4
ARIZONA	41	46,913	0.0	27	233	1.0
DELAWARE	42	22,173	0.0	44	71	0.3
NEW HAMPSHIRE	43	17,249	0.0	33	158	0.6
MONTANA	44	11,282	0.0	45	60	0.2
NEVADA	45	10,773	0.0	41	82	0.3
RHODE ISLAND	46	10,169	0.0	39	102	0.4
MAINE	47	8,651	0.0	34	148	0.6
VERMONT	48	8,337	0.0	41	82	0.3
TRUST TERRITORIES	49	6,045	0.0	55	3	0.0
ALASKA	50	5,534	0.0	43	75	0.3
GUAM	51	2,453	0.0	53	14	0.1
VIRGIN ISLANDS	52	2,049	0.0	56	2	0.0
HAWAII	53	1,774	0.0	48	44	0.2
SOUTH DAKOTA	54	767	0.0	50	24	0.1
DISTRICT OF COLUMBIA	55	628	0.0	52	15	0.1
NAVAJO NATION	56	245	0.0	54	9	0.0
TOTAL		**258,449,001**	**100.0**		**24,362**	**100.0**

Note: Column may not sum due to rounding.

Exhibit 1.6 **Rank Ordering of States Based on Number of Hazardous Waste Generators, and Quantity of RCRA Hazardous Waste Generated, 1993**

STATE	HAZARDOUS WASTE GENERATORS			HAZARDOUS WASTE QUANTITY		
	RANK	NUMBER OF GENERATORS	PERCENTAGE	RANK	TONS GENERATED	PERCENTAGE
NEW JERSEY	1	3,120	12.8	5	17,977,002	7.0
NEW YORK	2	2,036	8.4	16	1,498,421	0.6
CALIFORNIA	3	1,872	7.7	7	14,055,553	5.4
OHIO	4	1,524	6.3	15	1,739,928	0.7
TEXAS	5	1,286	5.3	1	63,435,688	24.6
ILLINOIS	6	1,238	5.1	8	12,494,369	4.8
PENNSYLVANIA	7	1,215	5.0	9	9,441,256	3.7
MICHIGAN	8	789	3.2	4	21,014,255	8.1
WASHINGTON	9	766	3.1	6	14,397,985	5.6
INDIANA	10	683	2.8	14	1,751,572	0.7
NORTH CAROLINA	11	623	2.6	30	447,718	0.2
WISCONSIN	12	605	2.5	29	522,523	0.2
MASSACHUSETTS	13	569	2.3	36	163,037	0.1
MARYLAND	14	566	2.3	33	308,621	0.1
TENNESSEE	15	518	2.1	2	33,937,638	13.1
KENTUCKY	16	472	1.9	31	397,488	0.2
CONNECTICUT	17	441	1.8	21	1,169,205	0.5
FLORIDA	18	438	1.8	34	213,888	0.1
GEORGIA	18	438	1.8	24	921,076	0.4
MISSOURI	20	415	1.7	28	528,922	0.2
SOUTH CAROLINA	21	388	1.6	32	310,399	0.1
VIRGINIA	22	379	1.6	39	96,850	0.0
LOUISIANA	23	347	1.4	3	31,715,905	12.3
MINNESOTA	24	300	1.2	11	5,993,221	2.3
KANSAS	25	297	1.2	12	3,144,665	1.2
ALABAMA	26	295	1.2	26	779,645	0.3
ARIZONA	27	233	1.0	41	46,913	0.0
IOWA	28	196	0.8	37	158,908	0.1
OKLAHOMA	29	193	0.8	22	1,145,732	0.4
OREGON	30	184	0.8	17	1,392,152	0.5
MISSISSIPPI	31	163	0.7	13	1,882,053	0.7
ARKANSAS	32	162	0.7	25	794,801	0.3
NEW HAMPSHIRE	33	158	0.6	43	17,249	0.0
MAINE	34	148	0.6	47	8,651	0.0
COLORADO	35	146	0.6	23	1,079,332	0.4
PUERTO RICO	36	109	0.4	18	1,373,639	0.5
UTAH	37	106	0.4	38	104,623	0.0
WEST VIRGINIA	37	106	0.4	10	8,471,643	3.3
RHODE ISLAND	39	102	0.4	46	10,169	0.0
NEBRASKA	40	96	0.4	40	90,471	0.0
NEVADA	41	82	0.3	45	10,773	0.0
VERMONT	41	82	0.3	48	8,337	0.0
ALASKA	43	75	0.3	50	5,534	0.0
DELAWARE	44	71	0.3	42	22,173	0.0
MONTANA	45	60	0.2	44	11,282	0.0
NEW MEXICO	45	60	0.2	35	176,409	0.1
IDAHO	47	57	0.2	20	1,255,865	0.5
HAWAII	48	44	0.2	53	1,774	0.0
WYOMING	49	26	0.1	19	1,316,689	0.5
SOUTH DAKOTA	50	24	0.1	54	767	0.0
NORTH DAKOTA	51	16	0.1	27	594,815	0.2
DISTRICT OF COLUMBIA	52	15	0.1	55	628	0.0
GUAM	53	14	0.1	51	2,453	0.0
NAVAJO NATION	54	9	0.0	56	245	0.0
TRUST TERRITORIES	55	3	0.0	49	6,045	0.0
VIRGIN ISLANDS	56	2	0.0	52	2,049	0.0
TOTAL		**24,362**	**100.0**		**258,449,001**	**100.0**

Note: Column may not sum due to rounding.

Exhibit 1.7 Fifty Largest RCRA Hazardous Waste Generators in the U.S., 1993

RANK	EPA ID	NAME	CITY	TONS GENERATED
1	TND003376928	TENN EASTMAN CO, DIV OF EASTMAN KODAK	KINGSPORT, TN	33,517,915
2	NJD002385730	E. I. DUPONT - CHAMBERS WORKS	DEEPWATER, NJ	17,096,589
3	MID000724724	DOW CHEMICAL COMPANY, MIDLAND PLANT SITE	MIDLAND, MI	15,990,731
4	LAD008080350	CITGO PETROLEUM CORP	LAKE CHARLES, LA	14,212,972
5	ILD080012305	SHELL OIL CO	ROXANA, IL	10,067,210
6	PAD980550594	SUN COMPANY INC - MARCUS HOOK REFINERY	MARCUS HOOK, PA	7,811,933
7	WAD009275082	SHELL OIL COMPANY	ANACORTES, WA	7,600,519
8	CAD009164021	SHELL OIL MARTINEZ MFG COMP	MARTINEZ, CA	7,489,104
9	TXD048210645	SWEENY REFINERY & PETROCHEMICAL	OLD OCEAN, TX	7,011,407
10	TXD980626774	PHILLIPS 66 CO., BORGER COMPLEX REF/NGL	BORGER, TX	6,445,848
11	WVD005005509	RHONE-POULENC AG. CO.	INSTITUTE, WV	6,395,977
12	TXD050309012	AMOCO CHEMICAL COMPANY - CHOCOLATE BAYOU	ALVIN, TX	5,288,075
13	LAD056024391	BP OIL COMPANY-ALLIANCE REFINERY	BELLE CHASSE, LA	4,970,936
14	TXD065099160	FINA OIL AND CHEMICAL CO.	PORT ARTHUR, TX	4,367,410
15	TXD008123317	VICTORIA PLANT DU PONT DE NEMOURS & CO	VICTORIA, TX	3,999,721
16	LAD041581422	UNION CARBIDE C & P CO INC - TAFT PLANT	TAFT, LA	3,589,670
17	TXD000792937	HILL PETROLEUM CO	TEXAS CITY, TX	3,520,767
18	LAD008175390	CYTEC INDUSTRIES INC - FORTIER PLANT	WAGGAMAN, LA	3,509,819
19	MND006162820	ASHLAND PETROLEUM CO	ST. PAUL PARK, MN	3,423,107
20	TXD001700806	MONSANTO COMPANY - CHOCOLATE BAYOU	ALVIN, TX	3,365,531
21	TXD083472266	ARCO CHEMICAL- CHANNELVIEW	CHANNELVIEW, TX	2,757,137
22	MND006172969	3M COTTAGE GROVE (CHEMOLITE)	COTTAGE GROVE,MN	2,498,891
23	WAD041337130	FABRICATION DIVISION AUBURN SITE	AUBURN, WA	2,426,764
24	TXD008080533	AMOCO OIL COMPANY	TEXAS CITY, TX	2,363,959
25	TXD058275769	LYONDELL PETROCHEMICAL COMPANY	CHANNELVIEW, TX	1,901,763
26	TXD000017756	DOW CHEMICAL COMPANY/LA PORTE SITE	LA PORTE, TX	1,879,166
27	TXD065096273	ROHM AND HAAS TEXAS INCORPORATED	DEER PARK, TX	1,756,870
28	KSD087418695	TOTAL PETROLEUM INCORPORATED	ARKANSAS CITY, KS	1,705,744
29	TXD980625966	EXXON CHEMICAL CO. BAYTOWN OLEFINS PLANT	BAYTOWN, TX	1,645,997
30	CAD041472986	NATIONAL SEMICONDUCTOR CORP	SANTA CLARA, CA	1,469,084
31	TXD008081101	E.I. DU PONT DE NEMOURS & CO., INC.	NEDERLAND, TX	1,422,701
32	LAD008213191	RUBICON INC	GEISMAR, LA	1,410,839
33	MID005339460	CADON PLATING COMPANY	WYANDOTTE, MI	1,360,000
34	WYD079959185	SINCLAIR OIL CORP	SINCLAIR, WY	1,315,312
35	TXD005942438	AMOCO CHEMICAL COMPANY - PLANT B SITE	TEXAS CITY, TX	1,268,907
36	KSD007482029	VULCAN MATERIALS COMPANY	WICHITA, KS	1,215,917
37	TXD980627111	SONY MICROELECTRONICS	SAN ANTONIO, TX	1,201,432
37	TXD988064564	SONY MICROELECTRONICS	SAN ANTONIO, TX	1,201,432
39	WAD009242314	OCCIDENTAL CHEMICAL CORP	TACOMA, WA	1,097,570
40	TXD008079642	DU PONT DE NEMOURS & CO., E.I.	ORANGE, TX	1,073,618
41	LAD008187080	DOW CHEMICAL COMPANY	PLAQUEMINE, LA	1,024,489
42	CTD990672081	PRATT & WHITNEY AIRCRAFT GROUP MD&CPD	EAST HARTFORD, CT	968,070
43	MSD096046792	E.I. DUPONT DE NEMOURS & CO.	PASS CHRISTIAN, MS	939,723
44	TXD078432457	HOECHST CELANESE CHEMICAL GROUP, INC	PASADENA, TX	935,701
45	MID005356795	GM - WILLOW RUN ASSEMBLY	YPSILANTI, MI	887,882
46	MID005358130	TOTAL PETROLEUM, INC., ALMA REFINERY	ALMA, MI	884,963
47	WVD045875291	DUPONT WASHINGTON WORKS	WASHINGTON, WV	878,511
48	TXD000836486	GREENS BAYOU PLANT	HOUSTON, TX	875,047
49	CAD008371379	NORRIS PLUMBING FIXTURES	WALNUT, CA	870,912
50	OKD000829440	ZINC CORPORATION OF AMERICA	BARTLESVILLE, OK	858,931
		TOTAL		211,772,570

Note: Column may not sum due to rounding.

A generator is a large quantity generator if it met the following federal criteria:

- The generator generated in any single month 1,000 kg (2,200 lbs. or 1.1 tons) or more RCRA hazardous waste; or

- The generator generated in any single month, or accumulated at any time, 1 kg (2.2 lbs) of RCRA acute hazardous waste; or

- The generator generated, or accumulated at any time, more than 100 kg (220 lbs) of spill cleanup material contaminated with RCRA acute hazardous.

It is important to note that the large quantity generators identified in this report have been included on the basis of the best available and most current information provided electronically to the EPA by the States. Both the EPA and the States have made significant efforts to ensure the accuracy of these data. However, the large quantity generator counts may include some generators that met lower, State-defined thresholds for large quantity generators. The EPA and the States endeavor to control for variation in State programs, but it is not always possible to distinguish generators that the federal threshold determines to be large quantity generators from generators that a State threshold determines to be large quantity generators. The EPA and the States also endeavor to ensure that only federally regulated wastes are counted in the determination of federal large quantity generators, but the large quantity generator counts may include generators that, when determining whether they were large quantity generators, counted wastes regulated only by their States or wastes that are exempt from federal regulation.

Because of differences between state and federal criteria for large quantity generators and because large quantity generator status is based on monthly generation amounts but the amount reported is for the report year, EPA seperated those generators that reported as large quantity generators into three categories for data quality purposes:

- Generators reporting 13.2 or more tons of RCRA hazardous waste generation.

  A generator that reports more than 13.2 tons (12 months x 1.1 tons) of annual hazardous waste generation must be a large quantity generator,

because the generator must have generated at least 1.1 tons in at least one month.

- Generators reporting 1.1 or more tons but less than 13.2 tons of RCRA hazardous waste generation.

  A generator that reports less than 13.2 tons in a year may not be a large quantity generator, because they may have generated less than 1.1 tons in every month.

- Generators reporting less than 1.1 tons of RCRA hazardous waste generation.

  A generator that reports less than 1.1 tons in a year is not a large quantity generator, because they did not generate 1.1 tons in any month.

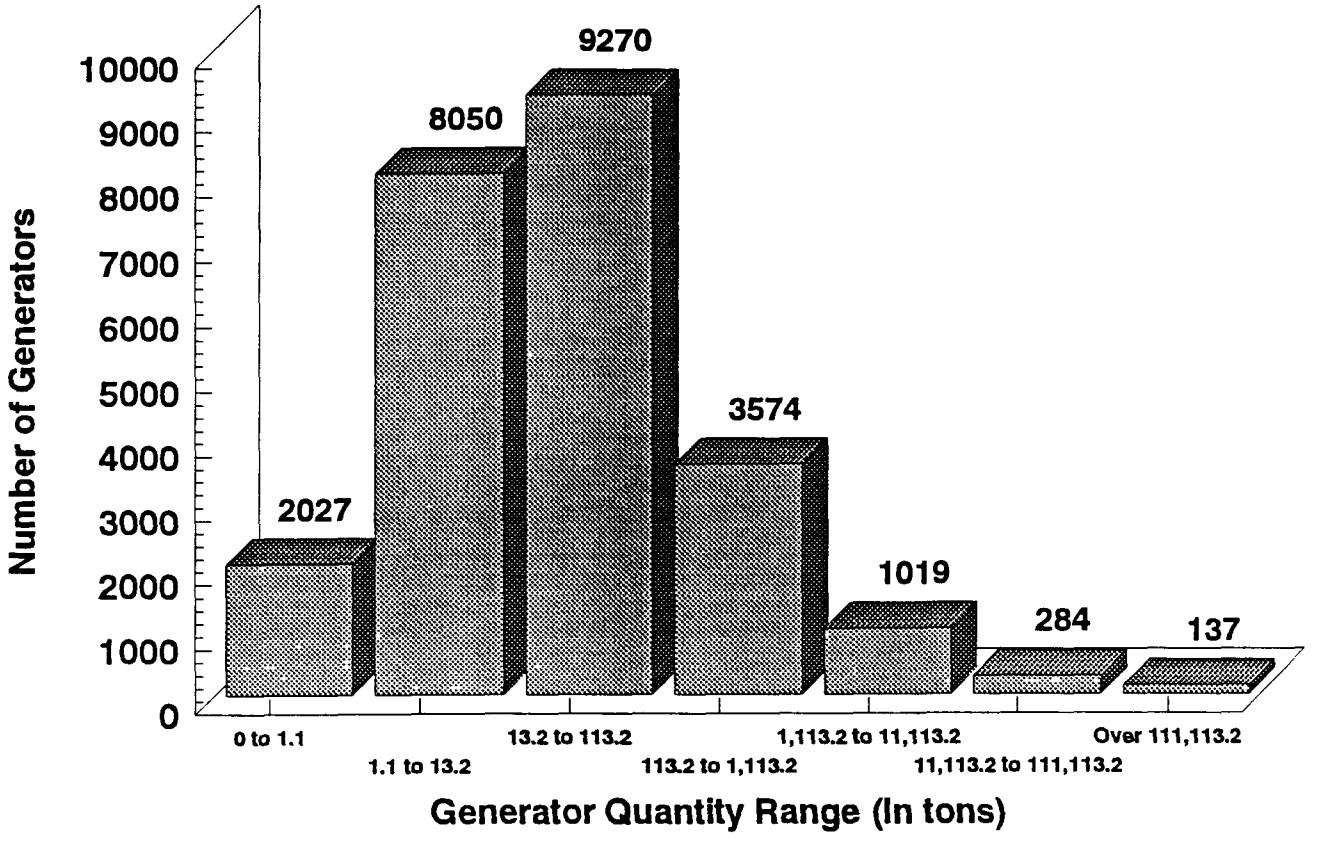
As shown in Exhibit 1.8, in 1993 there were 14,284 generators that generated more than 13.2 tons, 8,050 that generated between 1.1 and 13.2 tons, and 2,027 that generated less than 1.1 tons. Most large quantity generators (9,270) generated between 13.2 and 113.2 tons, which is the range displayed in Exhibit 1.8 with the highest distribution. The range with the second highest distribution is that between 1.1 and 13.2 tons, with 8,050 generators. Together, these two ranges account for 71% of the total number of large quantity generators. Although most large quantity generators generate between 13.2 and 113.2 tons, the fifty largest RCRA hazardous waste generators, listed in Exhibit 1.7, all generate over 111,113.2 tons.

Hazardous waste is distinguished according to its designation as a characteristic or listed waste. Characteristic and listed wastes are specifically described in 40 CFR[6] 261, and a list of waste codes is provided as Appendix B of this Report.

The term "characteristic waste" refers to any solid waste that exhibits a characteristic of ignitability (D001), corrosivity (D002), or reactivity (D003), or that contains toxic constituents in excess of federal standards (D004 - D043).

[6]Code of Federal Regulations.

Exhibit 1.8 Most Large Quantity Generators Generate Between 1.1 and 113.2 Tons of Waste, 1993



An ignitable waste is a solid waste that exhibits any of the following properties:

- A liquid, except aqueous solutions containing less than 24 percent alcohol, with a flash point less than 60 degrees Celsius (140 degrees Fahrenheit).
- A nonliquid capable, under normal conditions, of spontaneous and sustained combustion.
- An ignitable compressed gas per Department of Transportation (DOT) regulations.
- An oxidizer per DOT regulation.

A corrosive waste is a waste that exhibits the following properties:

- An aqueous material with pH less than or equal to 2 or greater than or equal to 12.5.

- A liquid that corrodes steel at a rate greater than 1/4 inch per year at a temperature of 55 degrees Celsius (130 degrees Fahrenheit).

A reactive waste is a waste that exhibits the following properties:

- Normally unstable and reacts violently without detonating.
- Reacts violently with water.
- Forms an explosive mixture with water.
- Contains cyanide or sulfide and generates toxic gases, vapors, or fumes at a pH of between 2 and 12.5.
- Capable of detonation if heated under confinement or subjected to strong initiating source.
- Capable of detonation at standard temperature and pressure.
- Listed by DOT as Class A or B explosive.

Wastes with the toxicity characteristic are identified through failure of the Toxicity Characteristic Leaching Procedure Test (TCLP). A solid waste exhibits the toxicity characteristic if, using the TCLP or an equivalent method, the extract from a representative sample of the waste contains any of the contaminants D004-D043 at a concentration equal to or greater than the value described in 40 CFR 261.24.

The term "listed waste" (F, K, P, and U codes) refers to waste that EPA has identified as hazardous as a result of its investigations of particular industries or because EPA has specifically recognized a commercial chemical waste's toxicity. A solid waste is a "listed" hazardous waste if it is named on one of three lists developed by EPA:

1) Non-specific source wastes ('F' wastes)--These are generic wastes, commonly produced by manufacturing and industrial processes. Examples from this list include spent halogenated solvents used in degreasing and wastewater treatment sludge from electroplating processes as well as dioxin wastes, most of which are acutely hazardous wastes due to the danger they present to human health and the environment.

2) Specific source wastes ('K' wastes)--This list consists of wastes from specifically identified industries such as wood preserving, petroleum refining, and organic chemical manufacturing. These wastes typically include sludges, still bottoms, wastewaters, spent catalysts, and residues, (e.g., wastewater treatment sludge from pigment production).

3) Commercial chemical products ('P' and 'U' wastes)--The third list consists of specific commercial chemical products, or manufacturing chemical intermediates. This list includes chemicals such as chloroform and creosote, acids such as sulfuric acid and hydrochloric acid, and pesticides such as DDT and kepone. The 'U' wastes include toxic chemicals while 'P' waste listings are reserved for acutely toxic chemicals.

Exhibit 1.9, 1.10, and 1.11 show the portions of the national generation total of 258 million tons that were characteristic, listed, or a mixture of characteristic and listed wastes. Characteristic wastes account for 62.5% (161.5 million tons) of the national total, listed wastes account for 9% (23 million tons), and mixtures of the two account for 28.4% (73.5 million tons). Listed only waste has remained consistent with 1991 percentages. However, wastes described as characteristic only have decreased by 9% since 1991, while wastes that are mixtures of characteristic and listed wastes have increased by 9%.

It is important to note changes with respect to the wastes that were newly regulated by the Toxicity Characteristic (TC) Rule promulgated in 1990. As shown in Exhibit 1.10, 91 million tons of waste were identified by these 25 new waste codes (D018 - D043), indicating that, at a minimum, the TC Rule captured 91 million tons of wastes not regulated prior to 1991. Exhibit 1.11 shows an additional 14 million tons of waste described with D018-D043 and other characteristic codes. Another 30 million tons were described by D018-D043 and other listed waste codes. While it is not possible to calculate exactly the amount of waste newly regulated by the TC Rule and the amount regulated prior to 1990, as much as 135 million tons may have been captured in 1993 by new toxicity characteristic waste listings. This compares to 162 million in 1991.

In conclusion, the amount of hazardous waste generated in 1993 was between 123 and 167 million tons without these newly regulated TC wastes. This compares to a total of 198 million tons generated in 1989 before promulgation of the TC Rule. The overall total generation has dropped from a total of 306 million tons in 1991 to 258 million tons in 1993.

Exhibit 1.9 **Percentages of National Generation Total that were Characteristic, Listed, or Both Characteristic and Listed Waste, 1993**

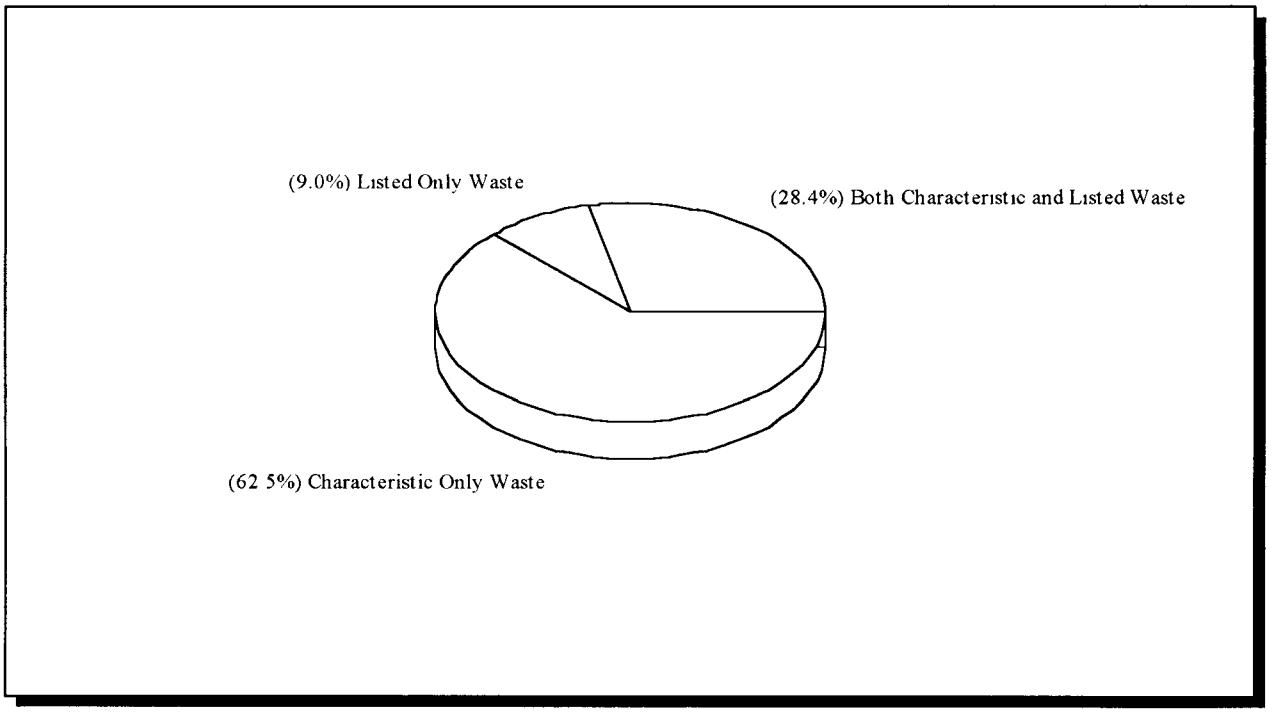


Exhibit 1.10 **Tons of Generated Waste that were Only Characteristic Waste, Only Listed Waste, or Both Characteristic and Listed Waste, 1993**

ONLY CHARACTERISTIC WASTES		ONLY LISTED WASTES		BOTH A CHARACTERISTIC AND A LISTED WASTE	
IGNITABLE	925,822	F WASTE	15,167,312		
CORROSIVE	27,338,842	K WASTE	3,213,938		
REACTIVE	2,277,271	P WASTE	20,662		
ONLY D004-17(TOXIC)	17,177,716	U WASTE	206,927		.....
ONLY D018-43(TOXIC)	91,372,188				
WASTES WITH MULTIPLE CHARACTERISTICS	22,502,134	WASTES MULTIPLY LISTED	4,721,492		
TOTAL	**161,593,975**	TOTAL	**23,330,375**	TOTAL	**73,516,078**

Note: All quantities are in tons.

Exhibit 1.11 Tons of Generated Wastes with Multiple Characteristics, that were Multiply Listed, or Both, 1993

ONLY CHARACTERISTIC WASTES BUT WITH MULTIPLE CHARACTERISTICS		ONLY LISTED WASTES BUT MULTIPLY LISTED		BOTH CHARACTERISTIC AND LISTED WASTES[1]	
IGNITABLE	7,476,942			ANY LISTED WASTE ALSO IGNITABLE	12,745,430
CORROSIVE	18,106,128			ANY LISTED WASTE ALSO CORROSIVE	17,737,900
REACTIVE	5,857,448			ANY LISTED WASTE ALSO REACTIVE	45,882,771
D004-17 (TOXIC)	11,811,988			ANY LISTED WASTE ALSO D004-17(TOXIC)	20,529,554
D018-43 (TOXIC)	13,607,974			ANY LISTED WASTE ALSO D018-43(TOXIC)	30,429,548
		F WASTE	2,523,969	F WASTES WITH ANY CHARACTERISTIC	64,418,437
		K WASTE	3,801,120	K WASTES WITH ANY CHARACTERISTIC	23,343,244
		P WASTE	1,111,528	P WASTES WITH ANY CHARACTERISTIC	4,631,140
		U WASTE	3,477,165	U WASTES WITH ANY CHARACTERISTIC	5,658,217
TOTAL	**22,502,134**	**TOTAL**	**4,721,492**	**TOTAL**	**73,516,078**

[1] Listed wastes with ignitable, corrosive, reactive, D004-17(Toxic), or D018-43(Toxic) characteristics respectively may have other characteristics as well. Similarly, characteristic wastes that are also F, K, P, or U listed wastes respectively may be other listed wastes as well.

Note: All quantities are in tons.
Columns do not sum to total because wastes may be included in more than one category.

2.0 WASTE MANAGEMENT

This section presents a series of exhibits describing the management of RCRA hazardous waste. EPA collected hazardous waste management information from any facility that operated treatment, storage, or disposal (TSD) units subject to RCRA permitting standards in 1993. These facilities are referred to throughout this report as TSDs. Wastes managed in treatment systems exempt from RCRA permitting standards, such as those subject to Clean Water Act or Safe Drinking Water Act permitting standards, were not included in this report.

Exhibits 2.1, 2.2, and 2.3 present the quantity of RCRA hazardous waste managed and the number of TSDs in the United States and in each EPA Region. Overall, a total of 2,584 facilities reported that they managed hazardous waste in TSD units subject to RCRA permitting standards. This represents a 1,278 facility decrease in the number of TSDs from 1991. Storage facilities account for 1,552 of these facilities, leaving 1,032 facilities that treated or disposed of 235 million tons of hazardous waste. This represents a 60 million ton decrease from 1991 quantities.

Region 6 managed the largest amount of waste (86 million tons, or 37%), while ranking second in the number of TSDs (371). Region 5 had the highest number of TSDs (572) and ranked second in the amount of waste managed (42 million tons, or 18%). Region 10 had the fewest number of TSDs (68) and Region 1 managed the least waste (146 thousand tons).

Exhibit 2.1 **Number and Percentage of RCRA TSD Facilities and Total RCRA Hazardous Waste Quantity Managed, by EPA Region, 1993**

EPA REGION	HAZARDOUS WASTE QUANTITY[1]		TSD FACILITIES	
	TONS MANAGED	PERCENTAGE	NUMBER	PERCENTAGE
1	145,707	0.1	139	5.4
2	19,953,849	8.5	283	10.9
3	17,703,960	7.5	199	7.7
4	39,145,810	16.7	368	14.3
5	41,912,210	17.8	572	22.2
6	86,102,783	36.7	371	14.4
7	3,894,112	1.7	198	7.7
8	1,442,585	0.6	83	3.2
9	12,899,741	5.5	303	11.7
10	11,663,277	5.0	68	2.6
TOTAL	**234,864,033**	**100.0**	**2,584**	**100.0**

Exhibit 2.2 **Number and Percentage of RCRA TSD Facilities and Total RCRA Hazardous Waste Quantity Managed, by Management Quantity, 1993**

EPA REGION	HAZARDOUS WASTE QUANTITY[1]		TSD FACILITIES	
	TONS MANAGED	PERCENTAGE	NUMBER	PERCENTAGE
6	86,102,783	36.7	371	14.4
5	41,912,210	17.8	572	22.2
4	39,145,810	16.7	368	14.3
2	19,953,849	8.5	283	10.9
3	17,703,960	7.5	199	7.7
9	12,899,741	5.5	303	11.7
10	11,663,277	5.0	68	2.6
7	3,894,112	1.7	198	7.7
8	1,442,585	0.6	83	3.2
1	145,707	0.1	139	5.4
TOTAL	**234,864,033**	**100.0**	**2,584**	**100.0**

[1]Quantity managed only by storage is excluded.

Note: Columns may not sum due to rounding.

Exhibit 2.3 **Number and Percentage of RCRA TSD Facilities and Total RCRA Hazardous Waste Quantity Managed in Each EPA Region, by Highest Number of TSD Facilities, 1993**

EPA REGION	TSD FACILITIES		HAZARDOUS WASTE QUANTITY[1]	
	NUMBER	PERCENTAGE	TONS MANAGED	PERCENTAGE
5	572	22.2	41,912,210	17.9
6	371	14.4	86,102,783	36.7
4	368	14.3	39,145,810	16.7
9	303	11.7	12,899,741	5.3
2	283	10.9	19,953,849	8.5
3	199	7.7	17,703,960	7.6
7	198	7.7	3,894,112	1.7
1	139	5.4	145,707	0.1
8	83	3.2	1,442,585	0.6
10	68	2.6	11,663,277	5.0
TOTAL	**2,584**	**100.0**	**234,864,033**	**100.0**

[1]Quantity managed only by storage is excluded.

Note: Columns may not sum due to rounding.

Exhibits 2.4, 2.5, and 2.6 present the quantity of RCRA hazardous waste managed and the number of TSDs in each State. The largest generating States were also the largest managing States. Texas managed the largest amount of waste (53 million tons), followed by Tennessee (34 million tons), Louisiana (31 million tons), Michigan (21 million tons), and New Jersey (18 million tons). Together these States accounted for 67% of the national management total.

California reported the most TSDs (253), followed by Texas (234), New Jersey (158), Michigan (136), and Illinois (134). Together these States accounted for 35% of the total number of TSDs. There were no facilities in the District of Columbia, Guam, New Hampshire, and South Dakota that reported treating or disposing waste in units subject to RCRA permitting standards, although these States did have facilities that reported operating permitted storage facilities. There were no facilities in the Navajo Nation that reported treating, disposing, or storing waste in units subject to RCRA permitting standards.

Exhibit 2.7 presents the 50 largest RCRA hazardous waste management facilities in the United States. Together, these TSDs accounted for more than 88% of the national management total. Tennessee Eastman Co. in Kingsport, TN, which was the largest generator, was also the largest TSD, managing 34 million tons of waste, followed by Dow Chemical Company, Midland Plant Site in Midland, Michigan (18 million tons), and E.I. DuPont Chambers Works in Deepwater, NJ (17 million tons). A total of 18 of the 50 largest TSDs were in Texas.

Exhibit 2.8 shows that wastewater management[1] (i.e., management in aqueous treatment units, neutralization tanks, underground injection wells, or other wastewater treatment systems) accounts for 94% of the national management total.

[1]Wastewater management is the management method described by the following BRS system type codes: M071-079, M081-085, M089, M091-094, M099, M121-125, M129, and M134. See Appendix A for further information.

Exhibit 2.4 Quantity of RCRA Hazardous Waste Managed and Number of RCRA TSD Facilities, by State, 1993

STATE	RCRA HAZARDOUS WASTE QUANTITY[1]			TSD FACILITIES		
	RANK	TONS MANAGED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	26	544,602	0.2	19	49	1.9
ALASKA	51	55	0.0	43	8	0.3
ARIZONA	41	32,681	0.0	24	32	1.2
ARKANSAS	22	804,914	0.3	34	24	0.9
CALIFORNIA	6	12,899,741	5.4	1	253	9.7
COLORADO	23	743,526	0.3	24	32	1.2
CONNECTICUT	36	87,080	0.0	16	56	2.2
DELAWARE	44	1,857	0.0	43	8	0.3
DISTRICT OF COLUMBIA	52	0	0.0	54	1	0.0
FLORIDA	32	134,387	0.1	12	68	2.6
GEORGIA	21	825,522	0.4	15	58	2.2
GUAM	52	0	0.0	51	2	0.1
HAWAII	48	591	0.0	47	6	0.2
IDAHO	20	935,049	0.4	41	9	0.3
ILLINOIS	7	11,446,050	4.9	5	134	5.2
INDIANA	13	1,972,197	0.8	7	103	4.0
IOWA	33	130,002	0.1	23	34	1.3
KANSAS	12	3,202,245	1.4	17	54	2.1
KENTUCKY	29	221,701	0.1	20	42	1.6
LOUISIANA	3	31,468,974	13.4	13	67	2.6
MAINE	47	908	0.0	32	25	1.0
MARYLAND	30	166,232	0.1	30	27	1.0
MASSACHUSETTS	39	45,607	0.0	24	32	1.2
MICHIGAN	4	20,686,504	8.8	4	136	5.3
MINNESOTA	11	6,015,307	2.6	18	50	1.9
MISSISSIPPI	14	1,901,716	0.8	36	22	0.9
MISSOURI	27	516,407	0.2	8	91	3.5
MONTANA	45	1,695	0.0	41	9	0.3
NAVAJO NATION	52	0	0.0	56	0	0.0
NEBRASKA	40	45,458	0.0	37	19	0.7
NEVADA	37	82,601	0.0	43	8	0.3
NEW HAMPSHIRE	52	0	0.0	51	2	0.1
NEW JERSEY	5	17,557,748	7.5	3	158	6.1
NEW MEXICO	31	165,968	0.1	39	15	0.6
NEW YORK	19	1,057,801	0.4	9	82	3.1
NORTH CAROLINA	28	336,975	0.1	11	73	2.8
NORTH DAKOTA	24	593,349	0.3	43	8	0.3
OHIO	15	1,697,197	0.7	6	117	4.5
OKLAHOMA	18	1,156,392	0.5	28	31	1.2
OREGON	25	568,633	0.2	40	11	0.4
PENNSYLVANIA	9	9,215,329	3.9	9	81	3.1
PUERTO RICO	16	1,338,211	0.6	20	42	1.6
RHODE ISLAND	42	11,118	0.0	37	19	0.7
SOUTH CAROLINA	17	1,184,248	0.5	32	25	1.0
SOUTH DAKOTA	52	0	0 0	50	3	0.1
TENNESSEE	2	33,996,659	14.5	28	31	1.2
TEXAS	1	52,506,535	22.4	2	234	9.1
TRUST TERRITORIES	43	5,808	0.0	51	2	0.1
UTAH	34	103,495	0.0	31	26	1.0
VERMONT	46	994	0.0	48	5	0.2
VIRGIN ISLANDS	50	90	0.0	54	1	0.0
VIRGINIA	38	81,550	0.0	14	59	2.3
WASHINGTON	8	10,159,540	4.3	22	40	1.5
WEST VIRGINIA	10	8,238,991	3.5	35	23	0.9
WISCONSIN	35	94,955	0.0	24	32	1.2
WYOMING	49	520	0.0	48	5	0.2
TOTAL		**234,864,033**	**100.0**		**2,584**	**100.0**

[1]Quantity managed only by storage is excluded.

Note: Columns may not sum due to rounding.

Exhibit 2.5 **Rank Ordering of States Based on Quantity of RCRA Hazardous Waste Managed, and Number of RCRA TSD Facilities, 1993**

STATE	RCRA HAZARDOUS WASTE QUANTITY[1]			TSD FACILITIES		
	RANK	TONS MANAGED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
TEXAS	1	52,506,535	22.4	2	234	9.1
TENNESSEE	2	33,996,659	14.5	28	31	1.2
LOUISIANA	3	31,468,974	13.4	13	67	2.6
MICHIGAN	4	20,686,504	8.8	4	136	5.3
NEW JERSEY	5	17,557,748	7.5	3	158	6.1
CALIFORNIA	6	12,899,741	5.4	1	253	9.7
ILLINOIS	7	11,446,050	4.9	5	134	5.2
WASHINGTON	8	10,159,540	4.3	22	40	1.5
PENNSYLVANIA	9	9,215,329	3.9	9	81	3.1
WEST VIRGINIA	10	8,238,991	3.5	35	23	0.9
MINNESOTA	11	6,015,307	2.6	18	50	1.9
KANSAS	12	3,202,245	1.4	17	54	2.1
INDIANA	13	1,972,197	0.8	7	103	4.0
MISSISSIPPI	14	1,901,716	0.8	36	22	0.9
OHIO	15	1,697,197	0.7	6	117	4.5
PUERTO RICO	16	1,338,211	0.6	20	42	1.6
SOUTH CAROLINA	17	1,184,248	0.5	32	25	1.0
OKLAHOMA	18	1,156,392	0.5	28	31	1.2
NEW YORK	19	1,057,801	0.4	9	82	3.1
IDAHO	20	935,049	0.4	41	9	0.3
GEORGIA	21	825,522	0.4	15	58	2.2
ARKANSAS	22	804,914	0.3	34	24	0.9
COLORADO	23	743,526	0.3	24	32	1.2
NORTH DAKOTA	24	593,349	0.3	43	8	0.3
OREGON	25	568,633	0.2	40	11	0.4
ALABAMA	26	544,602	0.2	19	49	1.9
MISSOURI	27	516,407	0.2	8	91	3.5
NORTH CAROLINA	28	336,975	0.1	11	73	2.8
KENTUCKY	29	221,701	0.1	20	42	1.6
MARYLAND	30	166,232	0.1	30	27	1.0
NEW MEXICO	31	165,968	0.1	39	15	0.6
FLORIDA	32	134,387	0.1	12	68	2.6
IOWA	33	130,002	0.1	23	34	1.3
UTAH	34	103,495	0.0	31	26	1.0
WISCONSIN	35	94,955	0.0	24	32	1.2
CONNECTICUT	36	87,080	0.0	16	56	2.2
NEVADA	37	82,601	0.0	43	8	0.3
VIRGINIA	38	81,550	0.0	14	59	2.3
MASSACHUSETTS	39	45,607	0.0	24	32	1.2
NEBRASKA	40	45,458	0.0	37	19	0.7
ARIZONA	41	32,681	0.0	24	32	1.2
RHODE ISLAND	42	11,118	0.0	37	19	0.7
TRUST TERRITORIES	43	5,808	0.0	51	2	0.1
DELAWARE	44	1,857	0.0	43	8	0.3
MONTANA	45	1,695	0.0	41	9	0.3
VERMONT	46	994	0.0	48	5	0.2
MAINE	47	908	0.0	32	25	1.0
HAWAII	48	591	0.0	47	6	0.2
WYOMING	49	520	0.0	48	5	0.2
VIRGIN ISLANDS	50	90	0.0	54	1	0.0
ALASKA	51	55	0.0	43	8	0.3
DISTRICT OF COLUMBIA	52	0	0.0	54	1	0.0
GUAM	52	0	0.0	51	2	0.1
NEW HAMPSHIRE	52	0	0.0	51	2	0.1
SOUTH DAKOTA	52	0	0.0	50	3	0.1
NAVAJO NATION	52	0	0.0	56	0	0.0
TOTAL		**234,864,033**	**100.0**		**2,584**	**100.0**

[1]Quantity managed only by storage is excluded.

Note: Columns may not sum due to rounding.

Exhibit 2.6 **Rank Ordering of States Based on Number of RCRA TSD Facilities, and Quantity of RCRA Hazardous Waste Managed, 1993**

STATE	TSD FACILITIES			RCRA HAZARDOUS WASTE QUANTITY[1]		
	RANK	NUMBER	PERCENTAGE	RANK	TONS MANAGED	PERCENTAGE
CALIFORNIA	1	253	9.7	6	12,899,741	5.4
TEXAS	2	234	9.1	1	52,506,535	22.4
NEW JERSEY	3	158	6.1	5	17,557,748	7.5
MICHIGAN	4	136	5.3	4	20,686,504	8.8
ILLINOIS	5	134	5.2	7	11,446,050	4.9
OHIO	6	117	4.5	15	1,697,197	0.7
INDIANA	7	103	4.0	13	1,972,197	0.8
MISSOURI	8	91	3 5	27	516,407	0.2
NEW YORK	9	82	3.1	19	1,057,801	0.4
PENNSYLVANIA	9	81	3.1	9	9,215,329	3.9
NORTH CAROLINA	11	73	2.8	28	336,975	0.1
FLORIDA	12	68	2.6	32	134,387	0.1
LOUISIANA	13	67	2.6	3	31,468,974	13.4
VIRGINIA	14	59	2.3	38	81,550	0.0
GEORGIA	15	58	2.2	21	825,522	0.4
CONNECTICUT	16	56	2.2	36	87,080	0.0
KANSAS	17	54	2.1	12	3,202,245	1.4
MINNESOTA	18	50	1.9	11	6,015,307	2.6
ALABAMA	19	49	1.9	26	544,602	0.2
KENTUCKY	20	42	1.6	29	221,701	0.1
PUERTO RICO	20	42	1.6	16	1,338,211	0.6
WASHINGTON	22	40	1.5	8	10,159,540	4.3
IOWA	23	34	1.3	33	130,002	0.1
ARIZONA	24	32	1.2	41	32,681	0.0
COLORADO	24	32	1.2	23	743,526	0.3
MASSACHUSETTS	24	32	1.2	39	45,607	0.0
WISCONSIN	24	32	1.2	35	94,955	0.0
OKLAHOMA	28	31	1.2	18	1,156,392	0.5
TENNESSEE	28	31	1.2	2	33,996,659	14.5
MARYLAND	30	27	1.0	30	166,232	0.1
UTAH	31	26	1.0	34	103,495	0.0
MAINE	32	25	1.0	47	908	0.0
SOUTH CAROLINA	32	25	1.0	17	1,184,248	0.5
ARKANSAS	34	24	0.9	22	804,914	0.3
WEST VIRGINIA	35	23	0.9	10	8,238,991	3.5
MISSISSIPPI	36	22	0.9	14	1,901,716	0.8
NEBRASKA	37	19	0.7	40	45,458	0.0
RHODE ISLAND	37	19	0.7	42	11,118	0.0
NEW MEXICO	39	15	0.6	31	165,968	0.1
OREGON	40	11	0.4	25	568,633	0.2
IDAHO	41	9	0.3	20	935,049	0.4
MONTANA	41	9	0.3	45	1,695	0.0
ALASKA	43	8	0.3	51	55	0.0
DELAWARE	43	8	0.3	44	1,857	0.0
NEVADA	43	8	0.3	37	82,601	0.0
NORTH DAKOTA	43	8	0.3	24	593,349	0.3
HAWAII	47	6	0.2	48	591	0.0
VERMONT	48	5	0.2	46	994	0.0
WYOMING	48	5	0.2	49	520	0.0
SOUTH DAKOTA	50	3	0.1	52	0	0.0
GUAM	51	2	0.1	52	0	0.0
NEW HAMPSHIRE	51	2	0.1	52	0	0.0
TRUST TERRITORIES	51	2	0.1	43	5,808	0.0
DISTRICT OF COLUMBIA	54	1	0.0	52	0	0.0
VIRGIN ISLANDS	54	1	0.0	50	90	0.0
NAVAJO NATION	56	0	0.0	52	0	0.0
TOTAL		**2,584**	**100.0**		**234,864,033**	**100.0**

[1]Quantity managed only by storage is excluded.

Note: Columns may not sum due to rounding.

Exhibit 2.7 Fifty Largest RCRA Hazardous Waste Managers in the U.S., 1993

RANK	EPA ID	NAME	CITY	TONS MANAGED[1]
1	TND003376928	TENN EASTMAN CO, DIV OF EASTMAN KODAK	KINGSPORT, TN	33,515,421
2	MID000724724	DOW CHEMICAL COMPANY, MIDLAND PLANT SITE	MIDLAND, MI	18,180,278
3	NJD002385730	E. I. DUPONT - CHAMBERS WORKS	DEEPWATER, NJ	17,138,088
4	LAD008080350	CITGO PETROLEUM CORP	LAKE CHARLES, LA	14,211,097
5	ILD080012305	SHELL OIL CO	ROXANA, IL	10,064,651
6	PAD980550594	SUN COMPANY INC - MARCUS HOOK REFINERY	MARCUS HOOK, PA	7,808,087
7	WAD009275082	SHELL OIL COMPANY	ANACORTES, WA	7,600,025
8	CAD009164021	SHELL OIL MARTINEZ MFG COMP	MARTINEZ, CA	7,487,521
9	TXD048210645	SWEENY REFINERY & PETROCHEMICAL	OLD OCEAN, TX	7,005,690
10	TXD980626774	PHILLIPS 66 CO., BORGER COMPLEX REF/NGL	BORGER, TX	6,711,382
11	WVD005005509	RHONE-POULENC AG. CO.	INSTITUTE, WV	6,395,558
12	TXD050309012	AMOCO CHEMICAL COMPANY - CHOCOLATE BAYOU	ALVIN, TX	5,287,948
13	LAD056024391	BP OIL COMPANY-ALLIANCE REFINERY	BELLE CHASSE, LA	4,971,172
14	TXD065099160	FINA OIL AND CHEMICAL CO.	PORT ARTHUR, TX	4,365,907
15	TXD008123317	VICTORIA PLANT DU PONT DE NEMOURS & CO	VICTORIA, TX	3,996,586
16	LAD041581422	UNION CARBIDE C & P CO INC - TAFT PLANT	TAFT, LA	3,588,881
17	LAD008175390	CYTEC INDUSTRIES INC - FORTIER PLANT	WAGGAMAN, LA	3,509,804
18	MND006162820	ASHLAND PETROLEUM CO	ST. PAUL PARK, MN	3,423,023
19	TXD001700806	MONSANTO COMPANY - CHOCOLATE BAYOU	ALVIN, TX	3,365,119
20	TXD083472266	ARCO CHEMICAL- CHANNELVIEW	CHANNELVIEW, TX	2,775,406
21	MND006172969	3M COTTAGE GROVE (CHEMOLITE)	COTTAGE GROVE,MN	2,510,370
22	WAD041337130	FABRICATION DIVISION AUBURN SITE	AUBURN, WA	2,423,653
23	TXD008080533	AMOCO OIL COMPANY	TEXAS CITY, TX	2,309,489
24	TXD000017756	DOW CHEMICAL COMPANY/LA PORTE SITE	LA PORTE, TX	1,883,367
25	TXD058275769	LYONDELL PETROCHEMICAL COMPANY	CHANNELVIEW, TX	1,842,014
26	TXD065096273	ROHM AND HAAS TEXAS INCORPORATED	DEER PARK, TX	1,753,157
27	KSD087418695	TOTAL PETROLEUM INCORPORATED	ARKANSAS CITY, KS	1,704,754
28	CAD041472986	NATIONAL SEMICONDUCTOR CORP	SANTA CLARA, CA	1,467,593
29	TXD008081101	E.I. DU PONT DE NEMOURS & CO., INC.	NEDERLAND, TX	1,422,625
30	LAD008213191	RUBICON INC	GEISMAR, LA	1,393,409
31	KSD007482029	VULCAN MATERIALS COMPANY	WICHITA, KS	1,340,028
32	TXD008079642	DU PONT DE NEMOURS & CO., E.I.	ORANGE, TX	1,073,823
33	LAD008187080	DOW CHEMICAL COMPANY	PLAQUEMINE, LA	1,024,139
34	TXD078432457	HOECHST CELANESE CHEMICAL GROUP, INC	PASADENA, TX	1,007,406
35	MSD096046792	E.I. DUPONT DE NEMOURS & CO.	PASS CHRISTIAN, MS	939,650
36	MID005358130	TOTAL PETROLEUM, INC., ALMA REFINERY	ALMA, MI	884,921
37	SC1890008989	DOE/WSRC SAVANNAH RIVER SITE	AIKEN, SC	876,867
38	OKD000829440	ZINC CORPORATION OF AMERICA	BARTLESVILLE, OK	857,284
39	TXD000836486	GREENS BAYOU PLANT	HOUSTON, TX	853,984
40	WVD004341491	CYTEC INDUSTRIES	WILLOW ISLAND, WV	851,768
41	TXD008079527	STERLING CHEMICALS, INC.	TEXAS CITY, TX	836,606
42	PRD090074071	PUERTO RICO SUN OIL CO.	YABUCOA, PR	832,458
43	OHD042157644	BP CHEMICALS INC	LIMA, OH	798,043
44	WVD045875291	DUPONT WASHINGTON WORKS	WASHINGTON, WV	792,869
45	LAD001890367	E. I. DUPONT DE NEMOURS - PONTCHARTRAIN	LAPLACE, LA	775,872
46	LAD001700756	MONSANTO	LULING, LA	770,730
47	PAD002334753	OCCIDENTAL CHEMICAL CORP	POTTSTOWN, PA	743,771
48	TXD000751172	BP CHEMICALS, INC.	PORT LAVACA, TX	693,386
49	ARD043195429	GREAT LAKES CHEMICAL CORPORATION	EL DORADO, AR	640,619
50	TXT490011293	FORMOSA PLASTICS	POINT COMFORT, TX	625,457
		TOTAL		207,331,760

[1]Quantity managed only by storage is excluded.

Note: Columns may not sum due to rounding.

Exhibit 2.8 Quantity and Percentage of RCRA Hazardous Wastewater and Non-Wastewater Management, 1993

MANAGEMENT TYPE	TONS MANAGED[1]	PERCENTAGE
Wastewater	219,917,201	93.7
Non-Wastewater	14,946,832	6.3
TOTAL	**234,864,033**	**100.0**

[1]Quantity managed only by storage is excluded.

Note: Columns may not sum due to rounding.

Exhibits 2.9, 2.10, and 2.11 present the quantity of RCRA hazardous waste managed by various management methods. The majority (70.6%) of the national total was managed in aqueous treatment units. One hundred and three (103) million tons were managed in aqueous organic treatment units, 6 million tons in aqueous inorganic treatment units, and 57 million tons in both inorganic and organic aqueous treatment units. (The wastewater management percentage, 93.7%, presented above in Exhibit 2.8 also includes neutralization, underground injection, and treatment in other wastewater management systems).

Land disposal accounted for 11.6% of the management total. Nationwide, 24 million tons of hazardous waste were disposed in underground injection wells, 2 million tons were disposed in landfills, 276 thousand tons were managed in surface impoundments, and 159 thousand tons were managed by land treatment (land farming).

Recovery operations accounted for 3.5% of the national management total. Facilities reported that 5.6 million tons were recovered by other methods such as acid regeneration, waste oil recovery, and non-solvent organic recovery, 1.3 million tons were managed in fuel blending units, 673 thousand tons were managed in solvent recovery units, and 523 thousand tons were managed in metals recovery units.

Thermal treatment accounted for 1.6% of the national management total. A total of 2 million tons were incinerated, while facilities reused 1.7 million tons as fuel in boilers or industrial furnaces.

Exhibit 2.9 **Quantity of RCRA Hazardous Waste Managed, by Management Method, 1993**

MANAGEMENT METHOD	SYSTEM TYPE CODE	TONS MANAGED[1]	PERCENTAGE OF QUANTITY	NUMBER OF FACILITIES[2,3]	PERCENTAGE OF FACILITIES[3]
METALS RECOVERY (FOR REUSE)	M011-M019	523,229	0.2	68	6.6
SOLVENTS RECOVERY	M021-M029	673,298	0.3	211	20.4
OTHER RECOVERY	M031-M039	5,581,561	2.4	100	9.7
INCINERATION	M041-M049	2,010,195	0.9	200	19.2
ENERGY RECOVERY (REUSE AS FUEL)	M051-M059	1,679,092	0.7	142	13.8
FUEL BLENDING	M061	1,383,249	0.6	90	8.6
AQUEOUS INORGANIC TREATMENT	M071-M079	6,495,773	2.8	147	14.3
AQUEOUS ORGANIC TREATMENT	M081-M089	102,782,119	43.8	106	10.3
AQUEOUS ORG & INORG TREATMENT	M091-M099	56,615,940	24.2	33	3.1
SLUDGE TREATMENT	M101-M109	209,352	0.1	31	3.0
STABILIZATION	M111-M119	1,031,866	0.4	74	7.1
OTHER TREATMENT	M121-M129	28,047,770	12.0	333	32.3
LAND TREATMENT / FARMING	M131	158,502	0.1	28	2.7
LANDFILL	M132	2,280,536	1.0	68	6.4
SURFACE IMPOUNDMENT	M133	276,164	0.1	7	0.6
DEEPWELL / UNDERGROUND INJECTION	M134	24,493,899	10.4	46	4.5
OTHER DISPOSAL	M137	619,580	0.3	46	4.5
UNKNOWN SYSTEM DUE TO INVALID CODE	UNKNOWN	1,907	0.0	13	1.3
TOTAL		**234,864,033**	**100.0**	**1,032**	

[1]Quantity managed only by storage is excluded.
[2]Facilities with only storage units are excluded.
[3]Column may not sum because facilities may have multiple handling methods.

Note: Columns may not sum due to rounding.

Exhibit 2.10 Management Method, by Quantity of RCRA Hazardous Waste Managed, 1993

MANAGEMENT METHOD	SYSTEM TYPE CODE	TONS MANAGED[1]	PERCENTAGE OF QUANTITY	NUMBER OF FACILITIES[2,3]	PERCENTAGE OF FACILITIES[3]
AQUEOUS ORGANIC TREATMENT	M081-M089	102,782,119	43.8	106	10.3
AQUEOUS ORG & INORG TREATMENT	M091-M099	56,615,940	24.2	33	3.1
OTHER TREATMENT	M121-M129	28,047,770	12.0	333	32.3
DEEPWELL / UNDERGROUND INJECTION	M134	24,493,899	10.4	46	4.5
AQUEOUS INORGANIC TREATMENT	M071-M079	6,495,773	2.8	147	14.3
OTHER RECOVERY	M031-M039	5,581,561	2.4	100	9.7
INCINERATION	M041-M049	2,010,195	0.9	200	19.2
LANDFILL	M132	2,280,536	1.0	68	6.4
ENERGY RECOVERY (REUSE AS FUEL)	M051-M059	1,679,092	0.7	142	13.8
FUEL BLENDING	M061	1,383,249	0.6	90	8.6
STABILIZATION	M111-M119	1,031,866	0.4	74	7.1
SOLVENTS RECOVERY	M021-M029	673,298	0.3	211	20.4
OTHER DISPOSAL	M137	619,580	0.3	46	4.5
METALS RECOVERY (FOR REUSE)	M011-M019	523,229	0.2	68	6.6
SURFACE IMPOUNDMENT	M133	276,164	0.1	7	0.6
SLUDGE TREATMENT	M101-M109	209,352	0.1	31	3.0
LAND TREATMENT / FARMING	M131	158,502	0.1	28	2.7
UNKNOWN SYSTEM DUE TO INVALID CODE	UNKNOWN	1,907	0.0	13	1.3
TOTAL		**234,864,033**	**100.0**	**1,032**	

[1]Quantity managed only by storage is excluded.
[2]Facilities with only storage units are excluded.
[3]Column may not sum because facilities may have multiple handling methods.

Note: Columns may not sum due to rounding.

Exhibit 2.11 **Management Method and Quantity of RCRA Hazardous Waste Managed, by Number of Facilities, 1993**

MANAGEMENT METHOD	SYSTEM TYPE CODE	TONS MANAGED[1]	PERCENTAGE OF QUANTITY	NUMBER OF FACILITIES[2,3]	PERCENTAGE OF FACILITIES[3]
OTHER TREATMENT	M121-M129	28,047,770	12.0	333	32.3
SOLVENTS RECOVERY	M021-M029	673,298	0.3	211	20.4
INCINERATION	M041-M049	2,010,195	0.9	200	19.2
AQUEOUS INORGANIC TREATMENT	M071-M079	6,495,773	2.8	147	14.3
ENERGY RECOVERY (REUSE AS FUEL)	M051-M059	1,679,092	0.7	142	13.8
AQUEOUS ORGANIC TREATMENT	M081-M089	102,782,119	43.8	106	10.3
OTHER RECOVERY	M031-M039	5,581,561	2.4	100	9.7
FUEL BLENDING	M061	1,383,249	0.6	90	8.6
STABILIZATION	M111-M119	1,031,866	0.4	74	7.1
METALS RECOVERY (FOR REUSE)	M011-M019	523,229	0.2	68	6.6
LANDFILL	M132	2,280,536	1.0	68	6.4
DEEPWELL / UNDERGROUND INJECTION	M134	24,493,899	10.4	46	4.5
OTHER DISPOSAL	M137	619,580	0.3	46	4.5
AQUEOUS ORG & INORG TREATMENT	M091-M099	56,615,940	24.2	33	3.1
SLUDGE TREATMENT	M101-M109	209,352	0.1	31	3.0
LAND TREATMENT / FARMING	M131	158,502	0.1	28	2.7
UNKNOWN SYSTEM DUE TO INVALID CODE	UNKNOWN	1,907	0.0	13	1.3
SURFACE IMPOUNDMENT	M133	276,164	0.1	7	0.6
TOTAL		**234,864,033**	**100.0**	**1,032**	

[1]Quantity managed only by storage is excluded.
[2]Facilities with only storage units are excluded.
[3]Column may not sum because facilities may have multiple handling methods.

Note: Columns may not sum due to rounding.

Exhibits 2.12, 2.13, and 2.14 present the quantity of RCRA hazardous waste managed in various treatment and disposal units, limited to waste received from off site in 1993. For wastes received from off site, the predominant management methods were landfill, fuel blending, energy recovery, and underground injection. Eight (8) million tons of waste (4% of the national total) was received and managed.

Land disposal accounts for the largest portion (30%) of the national management total of waste received from off site. Facilities reported that 1.7 million tons of hazardous wastes were disposed in landfills, 702 thousand tons were disposed in underground injection wells, and 58 thousand tons were managed by land treatment (land farming).

Recovery operations account for 23% of the total amount received from off site and managed on site. Nationwide, 956 thousand tons were managed in fuel blending units, 441 thousand tons were managed in metals recovery units, 431 thousand tons were managed in solvent recovery units, and 119 thousand tons were recovered by other methods such as acid regeneration, waste oil recovery, and non-solvent organic recovery.

Thermal treatment accounts for 17% of the received/managed total. Facilities reused 921 thousand tons as fuel in boilers or industrial furnaces and 488 thousand tons were incinerated.

Aqueous treatment accounts for only 10% of the total amount received from off site and managed on site. Five hundred seventy-eight (578) thousand tons were managed in aqueous inorganic treatment units, 179 thousand tons in aqueous organic treatment units, and 45 thousand tons in both inorganic and organic aqueous treatment units.

A comparison between the management profile for all wastes and those received from off site shows that wastes managed off site are managed differently. Most wastes managed onsite were managed by aqueous treatment. Wastes received from off site were managed by land disposal, recovery, or thermal treatment.

Exhibit 2.12 Quantity of RCRA Hazardous Waste Managed, by Management Method, Limited to Waste Received from Off Site, 1993

MANAGEMENT METHOD	SYSTEM TYPE CODE	TONS MANAGED[1]	PERCENTAGE OF QUANTITY	NUMBER OF FACILITIES[2,3]	PERCENTAGE OF FACILITIES[3]
METALS RECOVERY (FOR REUSE)	M011-M019	440,894	5.3	41	9.5
SOLVENTS RECOVERY	M021-M029	430,519	5.2	78	18.1
OTHER RECOVERY	M031-M039	118,600	1.4	26	6.0
INCINERATION	M041-M049	487,576	5.9	83	19.3
ENERGY RECOVERY (REUSE AS FUEL)	M051-M059	920,579	11.1	53	12.3
FUEL BLENDING	M061	956,303	11.5	86	19.8
AQUEOUS INORGANIC TREATMENT	M071-M079	577,667	7.0	51	11.9
AQUEOUS ORGANIC TREATMENT	M081-M089	178,809	2.2	27	6.3
AQUEOUS ORG & INORG TREATMENT	M091-M099	44,527	0.5	21	4.7
SLUDGE TREATMENT	M101-M109	4,606	0.1	16	3.7
STABILIZATION	M111-M119	707,883	8.5	39	8.8
OTHER TREATMENT	M121-M129	903,393	10.9	122	28.1
LAND TREATMENT / FARMING	M131	57,546	0.7	9	2.1
LANDFILL	M132	1,732,070	20.8	36	8.1
DEEPWELL / UNDERGROUND INJECTION	M134	701,719	8.4	15	3.5
OTHER DISPOSAL	M137	44,605	0.5	18	4.2
UNKNOWN SYSTEM DUE TO INVALID CODE	UNKNOWN	1,869	0.0	11	2.6
TOTAL		**8,309,165**	**100.0**	**432**	

[1]Quantity managed only by storage is excluded.
[2]Facilities with only storage units are excluded.
[3]Column may not sum because facilities may have multiple handling methods.

Note: Columns may not sum due to rounding.

Exhibit 2.13 Management Method, by Quantity of RCRA Hazardous Waste Managed, Limited to Waste Received from Off Site, 1993

MANAGEMENT METHOD	SYSTEM TYPE CODE	TONS MANAGED[1]	PERCENTAGE OF QUANTITY	NUMBER OF FACILITIES[2,3]	PERCENTAGE OF FACILITIES[3]
LANDFILL	M132	1,732,070	20.8	36	8.1
FUEL BLENDING	M061	956,303	11.5	86	19.8
ENERGY RECOVERY (REUSE AS FUEL)	M051-M059	920,579	11.1	53	12.3
OTHER TREATMENT	M121-M129	903,393	10.9	122	28.1
DEEPWELL / UNDERGROUND INJECTION	M134	701,719	8.4	15	3.5
STABILIZATION	M111-M119	707,883	8.5	39	8.8
AQUEOUS INORGANIC TREATMENT	M071-M079	577,667	7.0	51	11.9
INCINERATION	M041-M049	487,576	5.9	83	19.3
METALS RECOVERY (FOR REUSE)	M011-M019	440,894	5.3	41	9.5
SOLVENTS RECOVERY	M021-M029	430,519	5.2	78	18.1
AQUEOUS ORGANIC TREATMENT	M081-M089	178,809	2.2	27	6.3
OTHER RECOVERY	M031-M039	118,600	1.4	26	6.0
LAND TREATMENT / FARMING	M131	57,546	0.7	9	2.1
OTHER DISPOSAL	M137	44,605	0.5	18	4.2
AQUEOUS ORG & INORG TREATMENT	M091-M099	44,527	0.5	21	4.7
SLUDGE TREATMENT	M101-M109	4,606	0.1	16	3.7
UNKNOWN SYSTEM DUE TO INVALID CODE	UNKNOWN	1,869	0.0	11	2.6
TOTAL		**8,309,165**	**100.0**	**432**	

[1]Quantity managed only by storage is excluded.
[2]Facilities with only storage units are excluded.
[3]Column may not sum because facilities may have multiple handling methods.

Note: Columns may not sum due to rounding.

Exhibit 2.14 **Management Method and Quantity of RCRA Hazardous Waste Managed, by Number of Facilities, Limited to Waste Received from Off Site, 1993**

MANAGEMENT METHOD	SYSTEM TYPE CODE	TONS MANAGED[1]	PERCENTAGE OF QUANTITY	NUMBER OF FACILITIES[2,3]	PERCENTAGE OF FACILITIES[3]
OTHER TREATMENT	M121-M129	903,393	10.9	122	28.1
FUEL BLENDING	M061	956,303	11.5	86	19.8
INCINERATION	M041-M049	487,576	5.9	83	19.3
SOLVENTS RECOVERY	M021-M029	430,519	5.2	78	18.1
ENERGY RECOVERY (REUSE AS FUEL)	M051-M059	920,579	11.1	53	12.3
AQUEOUS INORGANIC TREATMENT	M071-M079	577,667	7.0	51	11.9
METALS RECOVERY (FOR REUSE)	M011-M019	440,894	5.3	41	9.5
STABILIZATION	M111-M119	707,883	8.5	39	8.8
LANDFILL	M132	1,732,070	20.8	36	8.1
AQUEOUS ORGANIC TREATMENT	M081-M089	178,809	2.2	27	6.3
OTHER RECOVERY	M031-M039	118,600	1.4	26	6.0
AQUEOUS ORG & INORG TREATMENT	M091-M099	44,527	0.5	21	4.7
OTHER DISPOSAL	M137	44,605	0.5	18	4.2
SLUDGE TREATMENT	M101-M109	4,606	0.1	16	3.7
DEEPWELL / UNDERGROUND INJECTION	M134	701,719	8.4	15	3.5
UNKNOWN SYSTEM DUE TO INVALID CODE	UNKNOWN	1,869	0.0	11	2.6
LAND TREATMENT / FARMING	M131	57,546	0.7	9	2.1
TOTAL		**8,309,165**	**100.0**	**432**	

[1]Quantity managed only by storage is excluded.
[2]Facilities with only storage units are excluded.
[3]Column may not sum because facilities may have multiple handling methods.

Note: Columns may not sum due to rounding.

3.0 SHIPMENTS AND RECEIPTS

In 1993, 23,964 shippers[1] reported shipping 17 million tons of RCRA hazardous waste. Exhibits 3.1, 3.2, and 3.3 present the quantity of waste shipped and the number of shippers in each EPA Region. Of the Regions, Region 5 reported shipping the largest amount of waste (6.4 million tons), and the largest number of shippers (5,127). Region 8 reported shipping the least amount of waste (171 thousand tons), and the smallest number of shippers (364).

Exhibits 3.4, 3.5, and 3.6 present the quantity of waste received and the number of TSD facilities that received waste in each EPA Region. Overall, 739 TSD facilities reported receiving 9 million tons of waste in 1993. Region 5 reported both the largest quantity of receipts (2.8 million tons) and the largest number of receivers (162). Region 8 reported receiving the least amount of waste (102 thousand tons), and the smallest number of receivers (31).

[1]The term "shipment" is intended to refer to the physical transfer of waste from one facility to another. In some cases, however, shipments occur between facilities that neighbor each other and are under the same corporate name. In these instances, EPA may have assigned unique EPA ID numbers to separate industrial sites within the same plant. The resulting shipments may merely be movement of wastes from one portion of the plant to another.

Exhibit 3.1 **Number and Percentage of Hazardous Waste Shippers and Total RCRA Hazardous Waste Quantity Shipped, by EPA Region, 1993**

EPA REGION	HAZARDOUS WASTE QUANTITY		SHIPPERS	
	TONS SHIPPED	PERCENTAGE	NUMBER	PERCENTAGE
1	1,196,178	6.9	1,496	6.2
2	1,257,159	7.2	5,078	21.2
3	790,048	4.6	2,317	9.7
4	1,307,260	7.5	3,288	13.7
5	6,380,203	36.8	5,127	21.4
6	3,855,600	22.2	2,017	8.4
7	378,521	2.2	987	4.1
8	171,232	1.0	364	1.5
9	1,756,553	10.1	2,240	9.3
10	249,134	1.4	1,050	4.4
TOTAL	**17,341,887**	**100.0**	**23,964**	**100.0**

Exhibit 3.2 **Number and Percentage of Hazardous Waste Shippers and Total Quantity of RCRA Hazardous Waste Shipped by Region, by the Total Quantity of Waste Shipped, 1993**

EPA REGION	HAZARDOUS WASTE QUANTITY		SHIPPERS	
	TONS SHIPPED	PERCENTAGE	NUMBER	PERCENTAGE
5	6,380,203	36.8	5,127	21.4
6	3,855,600	22.2	2,017	8.4
9	1,756,553	10.1	2,240	9.3
4	1,307,260	7.5	3,288	13.7
2	1,257,159	7.2	5,078	21.2
1	1,196,178	6.9	1,496	6.2
3	790,048	4.6	2,317	9.7
7	378,521	2.2	987	4.1
10	249,134	1.4	1,050	4.4
8	171,232	1.0	364	1.5
TOTAL	**17,341,887**	**100.0**	**23,964**	**100.0**

Note: Columns for these two exhibits may not sum due to rounding.

Exhibit 3.3 **Number and Percentage of Hazardous Waste Shippers and Total Quantity of RCRA Hazardous Waste Shipped by Region, by Highest Number of Shippers, 1993**

EPA REGION	SHIPPERS		HAZARDOUS WASTE QUANTITY	
	NUMBER	PERCENTAGE	TONS SHIPPED	PERCENTAGE
5	5,127	21.4	6,380,203	36.8
2	5,078	21.2	1,257,159	7.2
4	3,288	13.7	1,307,260	7.5
3	2,317	9.7	790,048	4.6
9	2,240	9.3	1,756,553	10.1
6	2,017	8.4	3,855,600	22.2
1	1,496	6.2	1,196,178	6.9
10	1,050	4.4	249,134	1.4
7	987	4.1	378,521	2.2
8	364	1.5	171,232	1.0
TOTAL	**23,964**	**100.0**	**17,341,887**	**100.0**

Exhibit 3.4 **Number and Percentage of Hazardous Waste Receivers and Total Quantity of RCRA Hazardous Waste Received, by EPA Region, 1993**

EPA REGION	HAZARDOUS WASTE QUANTITY		RECEIVING FACILITIES	
	TONS RECEIVED	PERCENTAGE	NUMBER	PERCENTAGE
1	117,659	1.3	34	4.6
2	574,590	6.4	57	7.7
3	432,335	4.8	60	8.1
4	969,056	10.8	123	16.7
5	2,751,541	30.7	162	22.0
6	1,653,624	18.5	108	14.7
7	560,236	6.3	50	6.8
8	101,950	1.1	31	4.2
9	1,528,059	17.1	78	10.3
10	260,824	2.9	36	4.9
TOTAL	**8,949,875**	**100.0**	**739**	**100.0**

Note: Columns for these two exhibits may not sum due to rounding.

Exhibit 3.5 **Number and Percentage of Hazardous Waste Receivers and Total Quantity of RCRA Hazardous Waste Received by Region, by the Total Quantity of Waste Received, 1993**

EPA REGION	HAZARDOUS WASTE QUANTITY		RECEIVING FACILITIES	
	TONS RECEIVED	PERCENTAGE	NUMBER	PERCENTAGE
5	2,751,541	30.7	162	22.0
6	1,653,624	18.5	108	14.7
9	1,528,059	17.1	78	10.3
4	969,056	10.8	123	16.7
2	574,590	6.4	57	7.7
7	560,236	6.3	50	6.8
3	432,335	4.8	60	8.1
10	260,824	2.9	36	4.9
1	117,659	1.3	34	4.6
8	101,950	1.1	31	4.2
TOTAL	**8,949,875**	**100.0**	**739**	**100.0**

Exhibit 3.6 **Number and Percentage of Hazardous Waste Receivers and Total Quantity of RCRA Hazardous Waste Received by Region, by the Number of Receiving Facilities, 1993**

EPA REGION	RECEIVING FACILITIES		HAZARDOUS WASTE QUANTITY	
	NUMBER	PERCENTAGE	TONS RECEIVED	PERCENTAGE
5	162	22.0	2,751,541	30.7
4	123	16.7	969,056	10.8
6	108	14.7	1,653,624	18.5
9	78	10.3	1,528,059	17.1
3	60	8.1	432,335	4.8
2	57	7.7	574,590	6.4
7	50	6.8	560,236	6.3
10	36	4.9	260,824	2.9
1	34	4.6	117,659	1.3
8	31	4.2	101,950	1.1
TOTAL	**739**	**100.0**	**8,949,875**	**100.0**

Note: Columns for these two exhibits may not sum due to rounding.

Exhibits 3.7, 3.8, and 3.9 present the quantity of waste shipped and the number of shippers in each State. Michigan reported shipping the largest quantity of waste (4.2 million tons), and New Jersey reported the largest number of shippers (2,917). The Trust Territories reported shipping the least amount of waste (135 tons), while the Virgin Islands reported the fewest number of shippers (1).

Exhibit 3.7 **Quantity of RCRA Hazardous Waste Shipped, and Number of Hazardous Waste Shippers, by State, 1993**

STATE	RCRA HAZARDOUS WASTE QUANTITY			NUMBER OF SHIPPERS		
	RANK	TONS SHIPPED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	12	286,129	1.7	25	294	1.2
ALASKA	47	5,363	0.0	43	73	0.3
ARIZONA	36	29,530	0.2	27	229	1.0
ARKANSAS	19	129,236	0.7	31	162	0.7
CALIFORNIA	3	1,713,939	9.9	3	1,862	7.8
COLORADO	23	105,496	0.6	35	146	0.6
CONNECTICUT	4	1,066,120	6.1	17	445	1.9
DELAWARE	37	20,602	0.1	44	72	0.3
DISTRICT OF COLUMBIA	54	628	0.0	52	15	0.1
FLORIDA	24	104,156	0.6	18	441	1.8
GEORGIA	18	150,248	0.9	19	435	1.8
GUAM	48	2,938	0.0	53	12	0.1
HAWAII	49	2,650	0.0	48	43	0.2
IDAHO	39	12,307	0.1	46	55	0.2
ILLINOIS	10	497,798	2.9	6	1,229	5.1
INDIANA	8	516,139	3.0	10	678	2.8
IOWA	33	43,606	0.3	28	196	0.8
KANSAS	15	204,170	1.2	26	290	1.2
KENTUCKY	17	184,139	1.1	16	461	1.9
LOUISIANA	14	267,861	1.5	23	346	1.4
MAINE	44	7,704	0.0	34	153	0.6
MARYLAND	26	96,591	0.6	14	536	2.2
MASSACHUSETTS	27	87,804	0.5	13	556	2.3
MICHIGAN	1	4,178,244	24.1	8	795	3.3
MINNESOTA	30	62,838	0.4	24	299	1.2
MISSISSIPPI	35	37,393	0.2	32	160	0.7
MISSOURI	20	122,268	0.7	20	409	1.7
MONTANA	41	9,504	0.1	47	48	0.2
NAVAJO NATION	55	236	0.0	54	9	0.0
NEBRASKA	43	8,477	0.0	40	92	0.4
NEVADA	46	7,125	0.0	41	82	0.3
NEW HAMPSHIRE	40	12,264	0.1	33	157	0.7
NEW JERSEY	7	544,213	3.1	1	2,917	12.2
NEW MEXICO	45	7,372	0.0	45	61	0.3
NEW YORK	6	643,313	3.7	2	2,041	8.5
NORTH CAROLINA	21	117,764	0.7	11	617	2.6
NORTH DAKOTA	50	2,532	0.0	51	17	0.1
OHIO	5	855,578	4.9	4	1,525	6.4
OKLAHOMA	28	81,387	0.5	29	190	0.8
OREGON	34	42,108	0.2	30	179	0.7
PENNSYLVANIA	9	513,355	3.0	7	1,214	5.1
PUERTO RICO	29	67,462	0.4	36	119	0.5
RHODE ISLAND	38	13,139	0.1	39	103	0.4
SOUTH CAROLINA	11	319,187	1.8	22	373	1.6
SOUTH DAKOTA	53	1,506	0.0	50	23	0.1
TENNESSEE	22	108,246	0.6	15	507	2.1
TEXAS	2	3,369,745	19.4	5	1,258	5.3
TRUST TERRITORIES	56	135	0.0	55	3	0.0
UTAH	32	50,544	0.3	37	106	0.4
VERMONT	42	9,147	0.1	41	82	0.3
VIRGIN ISLANDS	51	2,171	0.0	56	1	0.0
VIRGINIA	25	99,430	0.6	21	376	1.6
WASHINGTON	16	189,356	1.1	9	743	3.1
WEST VIRGINIA	31	59,442	0.3	38	104	0.4
WISCONSIN	13	269,605	1.6	12	601	2.5
WYOMING	52	1,651	0.0	49	24	0.1
TOTAL		**17,341,887**	**100.0**		**23,964**	**100.0**

Note: Columns may not sum due to rounding.

Exhibit 3.8 **Rank Ordering of States Based on Quantity of RCRA Hazardous Waste Shipped, and Number of Hazardous Waste Shippers, 1993**

STATE	RCRA HAZARDOUS WASTE QUANTITY			NUMBER OF SHIPPERS		
	RANK	TONS SHIPPED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
MICHIGAN	1	4,178,244	24.1	8	795	3.3
TEXAS	2	3,369,745	19.4	5	1,258	5.3
CALIFORNIA	3	1,713,939	9.9	3	1,862	7.8
CONNECTICUT	4	1,066,120	6.1	17	445	1.9
OHIO	5	855,578	4.9	4	1,525	6.4
NEW YORK	6	643,313	3.7	2	2,041	8.5
NEW JERSEY	7	544,213	3.1	1	2,917	12.2
INDIANA	8	516,139	3.0	10	678	2.8
PENNSYLVANIA	9	513,355	3.0	7	1,214	5.1
ILLINOIS	10	497,798	2.9	6	1,229	5.1
SOUTH CAROLINA	11	319,187	1.8	22	373	1.6
ALABAMA	12	286,129	1.7	25	294	1.2
WISCONSIN	13	269,605	1.6	12	601	2.5
LOUISIANA	14	267,861	1.5	23	346	1.4
KANSAS	15	204,170	1.2	26	290	1.2
WASHINGTON	16	189,356	1.1	9	743	3.1
KENTUCKY	17	184,139	1.1	16	461	1.9
GEORGIA	18	150,248	0.9	19	435	1.8
ARKANSAS	19	129,236	0.7	31	162	0.7
MISSOURI	20	122,268	0.7	20	409	1.7
NORTH CAROLINA	21	117,764	0.7	11	617	2.6
TENNESSEE	22	108,246	0.6	15	507	2.1
COLORADO	23	105,496	0.6	35	146	0.6
FLORIDA	24	104,156	0.6	18	441	1.8
VIRGINIA	25	99,430	0.6	21	376	1.6
MARYLAND	26	96,591	0.6	14	536	2.2
MASSACHUSETTS	27	87,804	0.5	13	556	2.3
OKLAHOMA	28	81,387	0.5	29	190	0.8
PUERTO RICO	29	67,462	0.4	36	119	0.5
MINNESOTA	30	62,838	0.4	24	299	1.2
WEST VIRGINIA	31	59,442	0.3	38	104	0.4
UTAH	32	50,544	0.3	37	106	0.4
IOWA	33	43,606	0.3	28	196	0.8
OREGON	34	42,108	0.2	30	179	0.7
MISSISSIPPI	35	37,393	0.2	32	160	0.7
ARIZONA	36	29,530	0.2	27	229	1.0
DELAWARE	37	20,602	0.1	44	72	0.3
RHODE ISLAND	38	13,139	0.1	39	103	0.4
IDAHO	39	12,307	0.1	46	55	0.2
NEW HAMPSHIRE	40	12,264	0.1	33	157	0.7
MONTANA	41	9,504	0.1	47	48	0.2
VERMONT	42	9,147	0.1	41	82	0.3
NEBRASKA	43	8,477	0.0	40	92	0.4
MAINE	44	7,704	0.0	34	153	0.6
NEW MEXICO	45	7,372	0.0	45	61	0.3
NEVADA	46	7,125	0.0	41	82	0.3
ALASKA	47	5,363	0.0	43	73	0.3
GUAM	48	2,938	0.0	53	12	0.1
HAWAII	49	2,650	0.0	48	43	0.2
NORTH DAKOTA	50	2,532	0.0	51	17	0.1
VIRGIN ISLANDS	51	2,171	0.0	56	1	0.0
WYOMING	52	1,651	0.0	49	24	0.1
SOUTH DAKOTA	53	1,506	0.0	50	23	0.1
DISTRICT OF COLUMBIA	54	628	0.0	52	15	0.1
NAVAJO NATION	55	236	0.0	54	9	0.0
TRUST TERRITORIES	56	135	0.0	55	3	0.0
TOTAL		17,341,887	100.0		23,964	100.0

Note: Columns may not sum due to rounding.

Exhibit 3.9 **Rank Ordering of States Based on Number of Hazardous Waste Shippers, and Quantity of RCRA Hazardous Waste Shipped, 1993**

STATE	NUMBER OF SHIPPERS			RCRA HAZARDOUS WASTE QUANTITY		
	RANK	NUMBER	PERCENTAGE	RANK	TONS SHIPPED	PERCENTAGE
NEW JERSEY	1	2,917	12.2	7	544,213	3.1
NEW YORK	2	2,041	8.5	6	643,313	3.7
CALIFORNIA	3	1,862	7.8	3	1,713,939	9.9
OHIO	4	1,525	6.4	5	855,578	4.9
TEXAS	5	1,258	5.3	2	3,369,745	19.4
ILLINOIS	6	1,229	5.1	10	497,798	2.9
PENNSYLVANIA	7	1,214	5.1	9	513,355	3.0
MICHIGAN	8	795	3.3	1	4,178,244	24.1
WASHINGTON	9	743	3.1	16	189,356	1.1
INDIANA	10	678	2.8	8	516,139	3.0
NORTH CAROLINA	11	617	2.6	21	117,764	0.7
WISCONSIN	12	601	2.5	13	269,605	1.6
MASSACHUSETTS	13	556	2.3	27	87,804	0.5
MARYLAND	14	536	2.2	26	96,591	0.6
TENNESSEE	15	507	2.1	22	108,246	0.6
KENTUCKY	16	461	1.9	17	184,139	1.1
CONNECTICUT	17	445	1.9	4	1,066,120	6.1
FLORIDA	18	441	1.8	24	104,156	0.6
GEORGIA	19	435	1.8	18	150,248	0.9
MISSOURI	20	409	1.7	20	122,268	0.7
VIRGINIA	21	376	1.6	25	99,430	0.6
SOUTH CAROLINA	22	373	1.6	11	319,187	1.8
LOUISIANA	23	346	1.4	14	267,861	1.5
MINNESOTA	24	299	1.2	30	62,838	0.4
ALABAMA	25	294	1.2	12	286,129	1.7
KANSAS	26	290	1.2	15	204,170	1.2
ARIZONA	27	229	1.0	36	29,530	0.2
IOWA	28	196	0.8	33	43,606	0.3
OKLAHOMA	29	190	0.8	28	81,387	0.5
OREGON	30	179	0.7	34	42,108	0.2
ARKANSAS	31	162	0.7	19	129,236	0.7
MISSISSIPPI	32	160	0.7	35	37,393	0.2
NEW HAMPSHIRE	33	157	0.7	40	12,264	0.1
MAINE	34	153	0.6	44	7,704	0.0
COLORADO	35	146	0.6	23	105,496	0.6
PUERTO RICO	36	119	0.5	29	67,462	0.4
UTAH	37	106	0.4	32	50,544	0.3
WEST VIRGINIA	38	104	0.4	31	59,442	0.3
RHODE ISLAND	39	103	0.4	38	13,139	0.1
NEBRASKA	40	92	0.4	43	8,477	0.0
VERMONT	41	82	0.3	42	9,147	0.1
NEVADA	41	82	0.3	46	7,125	0.0
ALASKA	43	73	0.3	47	5,363	0.0
DELAWARE	44	72	0.3	37	20,602	0.1
NEW MEXICO	45	61	0.3	45	7,372	0.0
IDAHO	46	55	0.2	39	12,307	0.1
MONTANA	47	48	0.2	41	9,504	0.1
HAWAII	48	43	0.2	49	2,650	0.0
WYOMING	49	24	0.1	52	1,651	0.0
SOUTH DAKOTA	50	23	0.1	53	1,506	0.0
NORTH DAKOTA	51	17	0.1	50	2,532	0.0
DISTRICT OF COLUMBIA	52	15	0.1	54	628	0.0
GUAM	53	12	0.1	48	2,938	0.0
NAVAJO NATION	54	9	0.0	55	236	0.0
TRUST TERRITORIES	55	3	0.0	56	135	0.0
VIRGIN ISLANDS	56	1	0.0	51	2,171	0.0
TOTAL		**23,964**	**100.0**		**17,341,887**	**100.0**

Note: Columns may not sum due to rounding.

Exhibits 3.10, 3.11, and 3.12 present the quantity of waste received and the number of TSD facilities receiving waste in each State. California reported receiving the largest quantity of waste (1.4 million tons) and Texas reported the highest number of TSD facilities receiving waste (64).

Five States reported they did not have any TSD facilities that received hazardous waste. The States are The District of Columbia, Navajo Nation, New Hampshire, Trust Territories, and Virgin Islands.

Overall, 739 receivers reported receiving 8.9 million tons of waste. This represents an 8.1 million tons difference between the amount of waste reported shipped and the amount reported received.

Exhibits 3.13 and 3.14 present listings of the 50 largest shippers and receivers, respectively, in the nation. The largest 50 shippers account for 62% of the total quantity shipped in the U.S. and the 50 largest receivers account for 58% of the total amount received.

Exhibit 3.10 **Quantity of RCRA Hazardous Waste Received and Number of Receivers, by State, 1993**

STATE	RCRA HAZARDOUS WASTE QUANTITY			NUMBER OF RECEIVERS		
	RANK	TONS RECEIVED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	12	261,986	3.1	26	11	1.5
ALASKA	47	521	0.0	48	1	0.1
ARIZONA	37	11,473	0.1	20	12	1.6
ARKANSAS	16	152,484	1.7	20	12	1.6
CALIFORNIA	1	1,430,897	16.0	2	58	7.6
COLORADO	33	34,754	0.4	30	8	1.1
CONNECTICUT	27	51,557	0.6	26	11	1.5
DELAWARE	46	679	0.0	48	1	0.1
DISTRICT OF COLUMBIA	52	0	0.0	52	0	0.0
FLORIDA	26	55,252	0.6	10	26	3.5
GEORGIA	29	45,565	0.5	14	19	2.6
GUAM	48	411	0.0	48	1	0.1
HAWAII	42	2,114	0.0	43	2	0.3
IDAHO	23	69,479	0.8	35	6	0.8
ILLINOIS	6	468,791	5.2	6	29	3.9
INDIANA	4	720,646	8.1	5	32	4.3
IOWA	35	17,416	0.2	30	8	1.1
KANSAS	13	257,850	2.9	20	12	1.6
KENTUCKY	18	133,033	1.5	18	15	2.0
LOUISIANA	7	462,058	5.2	16	17	2.3
MAINE	44	1,530	0.0	43	2	0.3
MARYLAND	32	38,989	0.4	32	7	0.9
MASSACHUSETTS	28	46,697	0.5	20	12	1.6
MICHIGAN	5	583,248	6.5	7	27	3.7
MINNESOTA	20	100,693	1.1	12	21	2.8
MISSISSIPPI	38	8,600	0.1	35	6	0.8
MISSOURI	11	276,775	3.1	11	23	3.1
MONTANA	51	31	0.0	43	2	0.3
NAVAJO NATION	52	0	0.0	52	0	0.0
NEBRASKA	39	8,195	0.1	32	7	0.9
NEVADA	22	83,164	0.9	38	5	0.7
NEW HAMPSHIRE	52	0	0.0	52	0	0.0
NEW JERSEY	14	224,586	2.5	16	17	2.3
NEW MEXICO	40	6,319	0.1	42	3	0.4
NEW YORK	9	309,636	3.5	4	35	4.7
NORTH CAROLINA	30	43,522	0.5	13	20	2.7
NORTH DAKOTA	45	1,080	0.0	35	6	0.8
OHIO	3	857,148	9.6	3	42	5.7
OKLAHOMA	15	172,674	1.9	20	12	1.6
OREGON	17	134,130	1.5	43	2	0.3
PENNSYLVANIA	10	302,601	3.4	7	27	3.7
PUERTO RICO	31	40,369	0.5	38	5	0.7
RHODE ISLAND	36	15,741	0.2	38	5	0.7
SOUTH CAROLINA	8	311,183	3.5	26	11	1.5
SOUTH DAKOTA	50	316	0.0	43	2	0.3
TENNESSEE	19	109,916	1.2	18	15	2.0
TEXAS	2	860,089	9.6	1	64	8.7
TRUST TERRITORIES	52	0	0.0	0	0	0.0
UTAH	24	65,388	0.8	20	12	1.6
VERMONT	41	2,135	0.0	41	4	0.5
VIRGIN ISLANDS	52	0	0.0	0	0	0.0
VIRGINIA	21	88,137	1.0	15	18	2.4
WASHINGTON	25	56,694	0.7	7	27	3.7
WEST VIRGINIA	43	1,930	0.0	32	7	0.9
WISCONSIN	34	21,015	0.2	26	11	1.5
WYOMING	49	381	0.0	48	1	0.1
TOTAL		**8,949,875**	**100.0**		**739**	**100.0**

Note: Columns may not sum due to rounding.

Exhibit 3.11 **Rank Ordering of States Based on Quantity of RCRA Hazardous Waste Received and Number of Receivers, 1993**

STATE	RCRA HAZARDOUS WASTE QUANTITY			NUMBER OF RECEIVERS		
	RANK	TONS RECEIVED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
CALIFORNIA	1	1,430,897	16.0	2	58	7.6
TEXAS	2	860,089	9.6	1	64	8.7
OHIO	3	857,148	9.6	3	42	5.7
INDIANA	4	720,646	8.1	5	32	4.3
MICHIGAN	5	583,248	6.5	7	27	3.7
ILLINOIS	6	468,791	5.2	6	29	3.9
LOUISIANA	7	462,058	5.2	16	17	2.3
SOUTH CAROLINA	8	311,183	3.5	26	11	1.5
NEW YORK	9	309,636	3.5	4	35	4.7
PENNSYLVANIA	10	302,601	3.4	7	27	3.7
MISSOURI	11	276,775	3.1	11	23	3.1
ALABAMA	12	261,986	3.1	26	11	1.5
KANSAS	13	257,850	2.9	20	12	1.6
NEW JERSEY	14	224,586	2.5	16	17	2.3
OKLAHOMA	15	172,674	1.9	20	12	1.6
ARKANSAS	16	152,484	1.7	20	12	1.6
OREGON	17	134,130	1.5	43	2	0.3
KENTUCKY	18	133,033	1.5	18	15	2.0
TENNESSEE	19	109,916	1.2	18	15	2.0
MINNESOTA	20	100,693	1.1	12	21	2.8
VIRGINIA	21	88,137	1.0	15	18	2.4
NEVADA	22	83,164	0.9	38	5	0.7
IDAHO	23	69,479	0.8	35	6	0.8
UTAH	24	65,388	0.8	20	12	1.6
WASHINGTON	25	56,694	0.7	7	27	3.7
FLORIDA	26	55,252	0.6	10	26	3.5
CONNECTICUT	27	51,557	0.6	26	11	1.5
MASSACHUSETTS	28	46,697	0.5	20	12	1.6
GEORGIA	29	45,565	0.5	14	19	2.6
NORTH CAROLINA	30	43,522	0.5	13	20	2.7
PUERTO RICO	31	40,369	0.5	38	5	0.7
MARYLAND	32	38,989	0.4	32	7	0.9
COLORADO	33	34,754	0.4	30	8	1.1
WISCONSIN	34	21,015	0.2	26	11	1.5
IOWA	35	17,416	0.2	30	8	1.1
RHODE ISLAND	36	15,741	0.2	38	5	0.7
ARIZONA	37	11,473	0.1	20	12	1.6
MISSISSIPPI	38	8,600	0.1	35	6	0.8
NEBRASKA	39	8,195	0.1	32	7	0.9
NEW MEXICO	40	6,319	0.1	42	3	0.4
VERMONT	41	2,135	0.0	41	4	0.5
HAWAII	42	2,114	0.0	43	2	0.3
WEST VIRGINIA	43	1,930	0.0	32	7	0.9
MAINE	44	1,530	0.0	43	2	0.3
NORTH DAKOTA	45	1,080	0.0	35	6	0.8
DELAWARE	46	679	0.0	48	1	0.1
ALASKA	47	521	0.0	48	1	0.1
GUAM	48	411	0.0	48	1	0.1
WYOMING	49	381	0.0	48	1	0.1
SOUTH DAKOTA	50	316	0.0	43	2	0.3
MONTANA	51	31	0.0	43	2	0.3
DISTRICT OF COLUMBIA	52	0	0.0	52	0	0.0
NAVAJO NATION	52	0	0.0	52	0	0.0
NEW HAMPSHIRE	52	0	0.0	52	0	0.0
TRUST TERRITORIES	52	0	0.0	52	0	0.0
VIRGIN ISLANDS	52	0	0.0	52	0	0.0
TOTAL		**8,949,875**	**100.0**		**739**	**100.0**

Note: Columns may not sum due to rounding.

Exhibit 3.12 **Rank Ordering of States Based on Number of Receiving Facilities, and Quantity of RCRA Hazardous Waste Received, 1993**

STATE	NUMBER OF RECEIVERS			RCRA HAZARDOUS WASTE QUANTITY		
	RANK	NUMBER	PERCENTAGE	RANK	TONS RECEIVED	PERCENTAGE
TEXAS	1	64	8.7	2	860,089	9.6
CALIFORNIA	2	58	7.6	1	1,013,924	16.0
OHIO	3	42	5.7	3	857,148	9.6
NEW YORK	4	35	4.7	9	309,636	3.5
INDIANA	5	32	4.3	4	720,646	8.1
ILLINOIS	6	29	3.9	6	468,791	5.2
MICHIGAN	7	27	3.7	5	583,248	6.5
PENNSYLVANIA	7	27	3.7	10	302,601	3.4
WASHINGTON	7	27	3.7	25	56,694	0.7
FLORIDA	10	26	3.5	26	55,252	0.6
MISSOURI	11	23	3.1	11	276,775	3.1
MINNESOTA	12	21	2.8	20	100,693	1.1
NORTH CAROLINA	13	20	2.7	30	43,522	0.5
GEORGIA	14	19	2.6	29	45,565	0.5
VIRGINIA	15	18	2.4	21	88,137	1.0
LOUISIANA	16	17	2.3	7	462,058	5.2
NEW JERSEY	16	17	2.3	14	224,586	2.5
KENTUCKY	18	15	2.0	18	133,033	1.5
TENNESSEE	18	15	2.0	19	109,916	1.2
KANSAS	20	12	1.6	13	257,850	2.9
OKLAHOMA	20	12	1.6	15	172,674	1.9
ARKANSAS	20	12	1.6	16	152,484	1.7
UTAH	20	12	1.6	24	65,388	0.8
MASSACHUSETTS	20	12	1.6	28	46,697	0.5
ARIZONA	20	12	1.6	37	11,473	0.1
SOUTH CAROLINA	26	11	1.5	8	311,183	3.5
ALABAMA	26	11	1.5	12	261,986	3.1
CONNECTICUT	26	11	1.5	27	51,557	0.6
WISCONSIN	26	11	1.5	34	21,015	0.2
COLORADO	30	8	1.1	33	34,754	0.4
IOWA	30	8	1.1	35	17,416	0.2
MARYLAND	32	7	0.9	32	38,989	0.4
NEBRASKA	32	7	0.9	39	8,195	0.1
WEST VIRGINIA	32	7	0.9	43	1,930	0.0
IDAHO	35	6	0.8	23	69,479	0.8
MISSISSIPPI	35	6	0.8	38	8,600	0.1
NORTH DAKOTA	35	6	0.8	45	1,080	0.0
NEVADA	38	5	0.7	22	83,164	0.9
PUERTO RICO	38	5	0.7	31	40,369	0.5
RHODE ISLAND	38	5	0.7	36	15,741	0.2
VERMONT	41	4	0.5	41	2,135	0.0
NEW MEXICO	42	3	0.4	40	6,319	0.1
OREGON	43	2	0.3	17	134,130	1.5
HAWAII	43	2	0.3	42	2,114	0.0
MAINE	43	2	0.3	44	1,530	0.0
SOUTH DAKOTA	43	2	0.3	50	316	0.0
MONTANA	43	2	0.3	51	31	0.0
DELAWARE	48	1	0.1	46	679	0.0
ALASKA	48	1	0.1	47	521	0.0
GUAM	48	1	0.1	48	411	0.0
WYOMING	48	1	0.1	49	381	0.0
DISTRICT OF COLUMBIA	52	0	0.0	52	0	0.0
NAVAJO NATION	52	0	0.0	52	0	0.0
NEW HAMPSHIRE	52	0	0.0	52	0	0.0
TRUST TERRITORIES	52	0	0.0	52	0	0.0
VIRGIN ISLANDS	52	0	0.0	52	0	0.0
TOTAL		**739**	**100.0**		**8,949,875**	**100.0**

Note: Columns may not sum due to rounding.

Exhibit 3.13 Fifty Largest RCRA Hazardous Waste Shippers in the U.S., 1993

RANK	EPA ID	NAME	CITY	TONS SHIPPED
1	TXD980625966	EXXON CHEMICAL CO. BAYTOWN OLEFINS PLANT	BAYTOWN, TX	1,646,453
2	MID005339460	CADON PLATING COMPANY	WYANDOTTE, MI	1,360,000
3	CTD990672081	PRATT & WHITNEY AIRCRAFT GROUP MD&CPD	EAST HARTFORD, CT	968,184
4	MID052033479	MOLD-TECH MI	WARREN, MI	904,141
5	MID005356795	GM - WILLOW RUN ASSEMBLY	YPSILANTI, MI	887,882
6	CAD008371379	NORRIS PLUMBING FIXTURES	WALNUT, CA	870,912
7	TXD981911209	OCCIDENTAL CHEMICAL VCM	DEER PARK, TX	773,593
8	MID981197254	AMERICAN BUMPER & MANUFACTURING COMPANY	IONIA, MI	365,572
9	NYD002126852	GMC HARRISON DIVISION	LOCKPORT, NY	329,154
10	SCD042627448	HARDWICKE CHEMICAL COMPANY	ELGIN, SC	165,994
11	MID980568836	GMC, NAPT-PONTIAC WEST ASSEMBLY	PONTIAC, MI	157,208
12	KSD007249980	ELF ATOCHEM NORTH AMERICA INC	WICHITA, KS	128,523
13	NJD981133150	REPUBLIC ENVIRONMENTAL RECYCLING INC	CLAYTON, NJ	128,289
14	WID076171008	LAND RECLAMATION CO	RACINE, WI	123,524
15	OHD076741149	SCM CHEMICALS, INC. ASHTABULA PLANT I	ASHTABULA, OH	118,070
16	IND093219012	HERITAGE ENVIRONMENTAL SERVICES, INC	INDIANAPOLIS, IN	87,864
17	LAD000777201	CHEMICAL WASTE MANAGEMENT	SULPHUR, LA	76,968
18	CAD981172554	SOUTHWEST MARINE, INC	SAN DIEGO, CA	76,137
19	CAD983608027	PARK CENTRAL BUILDING	LOS ANGELES, CA	73,150
20	KYD053348108	SAFETY-KLEEN CORP.	NEW CASTLE, KY	72,555
21	NYD002069748	CIBA GEIGY	QUEENSBURY, NY	71,212
22	IND005462601	LTV STEEL COMPANY	EAST CHICAGO, IN	70,310
23	MID980615298	PETRO-CHEM PROCESSING GRP. OF NORTRU INC	DETROIT, MI	67,626
24	TXD058265067	ARCO CHEMICAL COMPANY - BAYPORT	PASADENA, TX	64,989
25	TXD008080533	AMOCO OIL COMPANY	TEXAS CITY, TX	62,507
26	TXD000792937	HILL PETROLEUM CO	TEXAS CITY, TX	59,724
27	TXD058275769	LYONDELL PETROCHEMICAL COMPANY	CHANNELVIEW, TX	59,547
28	OHD005048947	SYSTECH ENVIRONMENTAL CORPORATION	PAULDING, OH	54,840
29	CAD044405603	INTERNATIONAL EXTRUSION CORP	ALHAMBRA, CA	53,824
30	ALD000622464	CHEMICAL WASTE MANAGEMENT	EMELLE, AL	51,613
31	CAD982361404	TAMCO	RANCHO CYCANIBG, CA	47,945
32	WAD988466942	WEYERHAEUSER - DUPONT	DUPONT, WA	47,457
33	CAD009452657	ROMIC ENV TECH CORP	EAST PALO ALTO, CA	47,046
34	CAD045256187	LOCKHEED ENVIR SYS & TECH	BURBANK, CA	46,372
35	ARD069748192	ENSCO INC	EL DORADO, AR	46,082
36	ALD983189606	SOUTHERN COMPANY DRUM SITE	WILSONVILLE, AL	42,730
37	ILD980613913	SAFETY KLEEN ENVIROSYSTEMS CO	DOLTON, IL	42,663
38	MID000724831	ENVOTECH MANAGEMENT SERVICES, INC	BELLEVILLE, MI	40,473
39	WID098547854	METRO DISPOSAL SERVICE INC	FRANKLIN, WI	39,625
40	TXD077603371	SAFETY-KLEEN CORPORATION DENTON RC	DENTON, TX	38,686
41	ILD041889023	CLARK OIL & REFINING CO	HARTFORD, IL	37,719
42	ARD981057870	RINECO	HASKELL-BENTON, AR	37,378
43	NYD980536288	DUPONT COMPANY	NIAGARA FALLS, NY	36,096
44	CAD043237486	CHEVRON CHEMICAL CO	RICHMOND, CA	35,769
45	ALD070513767	M & M CHEMICAL & EQUIPMENT COMPANY, INC.	ATTALLA, AL	35,371
46	IND181157009	NUCOR STEEL	CRAWFORDSVILLE, IN	34,642
47	MID017422304	MCLOUTH STEEL, TRENTON PLANT	TRENTON, MI	32,431
48	OHD004228003	REPUBLIC ENGR ED STEELS CANTON PLANT	CANTON, OH	30,974
49	NJD002182897	SAFETY-KLEEN CORP.	LINDEN, NJ	29,592
50	COD007057995	SUNDSTRAND AEROSPACE	DENVER, CO	29,446
		TOTAL		10,708,863

Note:

- Columns may not sum due to rounding.

Exhibit 3.14 Fifty Largest RCRA Hazardous Waste Receivers in the U.S., 1993

RANK	EPA ID	NAME	CITY	TONS RECEIVED
1	CAD008274938	KAISER RESOURCES INC	FONTANA, CA	592,160
2	LAD000777201	CHEMICAL WASTE MANAGEMENT	SULPHUR, LA	238,697
3	OHD045243706	ENVIROSAFE SERVICES OF OHIO INC	OREGON, OH	182,151
4	ALD000622464	CHEMICAL WASTE MANAGEMENT	EMELLE, AL	154,870
5	IND000199653	QUEMETCO, INC.	INDIANAPOLIS, IN	148,552
6	CAD097030993	NORRIS INDUSTRIES, INC.	VERNON, CA	145,929
7	OKD065438376	U.S. POLL. CONTROL, INC.-LONE MOUNTAIN	WAYNOKA, OK	142,913
8	OHD020273819	CHEMICAL WASTE MANAGEMENT INC	VICKERY, OH	141,389
9	OHD980793384	RESERVE ENVIRONMENTAL SERVICES INC	ASHTABULA, OH	132,901
10	ORD089452353	CHEMICAL WASTE MANAGEMENT OF THE NW	ARLINGTON, OR	131,494
11	MID000724831	ENVOTECH MANAGEMENT SERVICES, INC	BELLEVILLE, MI	128,750
12	KSD007482029	VULCAN MATERIALS COMPANY	WICHITA, KS	124,382
13	IND078911146	CHEMICAL WASTE MANAGEMENT OF INDIANA INC	FORT WAYNE, IN	120,147
14	TXD000838896	CHEMICAL WASTE MANAGEMENT INC.	PORT ARTHUR, TX	117,693
15	NYD030485288	REVERE SMELTING & REFINING CORPORATION	MIDDLETOWN, NY	110,523
16	NYD049836679	CWM CHEMICAL SERVICES, INC.	MODEL CITY, NY	109,985
17	TXD000719518	DISPOSAL SYSTEMS, INC.	DEER PARK, TX	102,390
18	ILD000805812	PEORIA DISPOSAL CO INC	PEORIA, IL	100,670
19	SCD070375985	LAIDLAW ENV SVS OF SC INC	PINEWOOD, SC	99,904
20	MOD029729688	HOLNAM INCORPORATED SAFETY-KLEEN	CLARKSVILLE, MO	93,604
21	LAD981057706	MARINE SHALE PROCESSORS	AMELIA, LA	91,658
22	IND093219012	HERITAGE ENVIRONMENTAL SERVICES, INC	INDIANAPOLIS, IN	88,330
23	MID980615298	PETRO-CHEM PROCESSING GRP. OF NORTRU INC	DETROIT, MI	83,701
24	ILD010284248	CID RECYCLING & DISPOSAL FAC	CALUMET CITY, IL	83,160
25	MID048090633	WAYNE DISPOSAL INCORPORATED	BELLEVILLE, MI	82,062
26	SCD003351699	GIANT CEMENT COMPANY	HARLEYVILLE, SC	79,725
27	ILD980613913	SAFETY KLEEN ENVIROSYSTEMS CO	DOLTON, IL	78,429
28	IND980503890	HERITAGE ENVIROMENTAL SERVICES, INC.	ROACHDALE, IN	78,274
29	NVT330010000	US ECOLOGY INC	LATHROP WELLS, NV	76,863
30	IND005081542	ESSROC MATERIALS, INC	LOGANSPORT, IN	75,956
31	TXD000761254	CHEMICAL WASTE MANAGEMENT INC.	CORPUS CHRISTI, TX	75,539
32	MOD054018288	CONTINENTAL CEMENT COMPANY	HANNIBAL, MO	74,952
33	KSD980633259	SYSTECH ENVIRONMENTAL	FREDONIA, KS	74,299
34	PAD004835146	MILL SERVICE INC - YUKON	YUKON, PA	73,955
35	ILD000666206	ENVIRITE CORP	HARVEY, IL	70,258
36	IDD073114654	ENVIROSAFE SERVICES OF IDAHO, INC	GRAND VIEW, ID	69,153
37	TXD097673149	EMPAK INC.	DEER PARK, TX	65,904
38	IND077042034	SAFETY-KLEEN OIL RECOVERY CO.	EAST CHICAGO, IN	65,570
39	TXD055141378	ROLLINS ENVIRONMENTAL SERVICES (TX) INC.	DEER PARK, TX	63,285
40	MID060975844	MICHIGAN RECOVERY SYSTEMS INCORPORATED	ROMULUS, MI	63,227
41	MND006148092	GOPHER SMELTING & REFINING COMPANY	EAGAN, MN	61,357
42	PAD010154045	ENVIRITE CORPORATION	YORK, PA	59,469
43	KYD053348108	SAFETY-KLEEN CORP.	NEW CASTLE, KY	58,880
44	TXD007349327	TEXAS INDUSTRIES MIDLOTHIAN CEMENT PLANT	MIDLOTHIAN, TX	56,171
45	ARD981512270	ASH GROVE CEMENT FOREMAN	FOREMAN, AR	55,895
46	OHD980587364	SAFETY KLEEN CORPORATION	HEBRON, OH	55,136
47	CAD980883177	GIBSON ENVIRONMENTAL	BAKERSFIELD, CA	55,025
48	OHD987048733	LAFARGE CORPORATION	PAULDING, OH	54,831
49	MID980684088	SOLVENT DISTILLERS GROUP OF NORTRU INC.	DETROIT, MI	54,599
50	TXD000742304	GIBRALTAR CHEMICAL RESOURCES, INC.	WINONA, TX	54,479
		TOTAL		5,199,248

Note:

- Columns may not sum due to rounding.
- CBI data are excluded from this exhibit.

4.0 IMPORTS AND EXPORTS

Exhibits 4.1 and 4.2 present hazardous waste imports and exports, by Region and by State, respectively. Only those quantities of waste that enter or leave the State are counted in this category. Exhibit 4.1 shows Region 5 reported importing the largest quantity (1.3 million tons) and exporting the largest quantity (2.4 million tons) of waste. Region 8 reported importing the smallest quantity (52 thousand tons) and exporting the smallest quantity (124 thousand tons) of waste. Exhibit 4.2 shows Ohio reported importing the largest quantity of waste (423 thousand tons). Nine States reported they did not import waste in 1993. The States are Alaska, The District of Columbia, Montana, Navajo Nation, New Hampshire, Puerto Rico, Trust Territories, Virgin Islands, and Wyoming. Michigan reported exporting the largest quantity of waste (1.5 million tons), and Trust Territories, with 135 tons, reported exporting the smallest quantity.

Exhibit 4.1 RCRA Hazardous Waste Imports and Exports, by EPA Region, 1993

EPA REGION	TOTAL IMPORTS (TONS)	TOTAL EXPORTS (TONS)
1	65,527	183,256
2	256,193	476,805
3	209,042	508,124
4	703,857	847,519
5	1,310,415	2,358,414
6	934,445	657,316
7	388,302	208,302
8	52,459	123,867
9	134,641	1,216,928
10	208,038	201,092
TOTAL	**4,262,921**	**6,781,622**

Note: Columns may not sum due to rounding.

Exhibit 4.2 RCRA Hazardous Waste Imports, Exports, by State, 1993

STATE	IMPORTS (TONS)	EXPORTS (TONS)
ALABAMA	178,319	166,233
ALASKA	0	4,504
ARIZONA	3,787	23,771
ARKANSAS	133,134	109,612
CALIFORNIA	48,732	1,184,489
COLORADO	18,034	90,429
CONNECTICUT	32,400	78,469
DELAWARE	463	20,263
DISTRICT OF COLUMBIA	0	628
FLORIDA	20,119	70,731
GEORGIA	27,501	137,189
GUAM	1	505
HAWAII	983	2,089
IDAHO	67,714	9,418
ILLINOIS	209,106	263,510
INDIANA	340,284	200,877
IOWA	2,545	29,162
KANSAS	120,624	65,984
KENTUCKY	113,139	161,830
LOUISIANA	325,665	168,476
MAINE	91	7,408
MARYLAND	26,891	80,847
MASSACHUSETTS	20,490	64,950
MICHIGAN	266,919	1,483,705
MINNESOTA	60,212	40,839
MISSISSIPPI	7,492	36,920
MISSOURI	258,537	105,032
MONTANA	0	9,322
NAVAJO NATION	0	236
NEBRASKA	6,596	8,124
NEVADA	81,138	5,703
NEW HAMPSHIRE	0	11,679
NEW JERSEY	138,153	276,399
NEW MEXICO	49	7,325
NEW YORK	118,040	148,463
NORTH CAROLINA	25,525	102,299
NORTH DAKOTA	468	2,460
OHIO	423,378	295,335
OKLAHOMA	153,779	65,467
OREGON	115,068	26,774
PENNSYLVANIA	152,852	300,390
PUERTO RICO	0	49,772
RHODE ISLAND	11,471	11,766
SOUTH CAROLINA	248,456	95,923
SOUTH DAKOTA	125	1,503
TENNESSEE	83,306	76,394
TEXAS	321,818	306,437
TRUST TERRITORIES	0	135
UTAH	33,832	18,503
VERMONT	1,077	8,984
VIRGIN ISLANDS	0	2,171
VIRGINIA	27,694	56,854
WASHINGTON	25,257	160,396
WEST VIRGINIA	1,141	49,142
WISCONSIN	10,516	74,149
WYOMING	0	1,649
TOTAL	**4,262,921**	**6,781,622**

Note: Columns may not sum due to rounding.

APPENDIX A

SYSTEM TYPE CODES

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SYSTEM TYPE CODES

Code	System type
METALS RECOVERY (FOR REUSE)	
M011	High temperature metals recovery
M012	Retorting
M013	Secondary smelting
M014	Other metals recovery for reuse: e.g., ion exchange, reverse osmosis, acid leaching, etc. (Specify in Comments)
M019	Metals recovery - type unknown
SOLVENTS RECOVERY	
M021	Fractionation/distillation
M022	Thin film evaporation
M023	Solvent extraction
M024	Other solvent recovery (Specify in Comments)
M029	Solvents recovery - type unknown
OTHER RECOVERY	
M031	Acid regeneration
M032	Other recovery: e.g., waste oil recovery, nonsolvent organics recovery, etc. (Specify in Comments)
M039	Other recovery - type unknown
INCINERATION	
M041	Incineration - liquids
M042	Incineration - sludges
M043	Incineration - solids
M044	Incineration - gases
M049	Incineration - type unknown
ENERGY RECOVERY (REUSE AS FUEL)	
M051	Energy recovery - liquids
M052	Energy recovery - sludges
M053	Energy recovery - solids
M059	Energy recovery - type unknown
FUEL BLENDING	
M061	Fuel blending
AQUEOUS INORGANIC TREATMENT	
M071	Chrome reduction followed by chemical precipitation
M072	Cyanide destruction followed by chemical precipitation
M073	Cyanide destruction only
M074	Chemical oxidation followed by chemical precipitation
M075	Chemical oxidation only
M076	Wet air oxidation
M077	Chemical precipitation
M078	Other aqueous inorganic treatment: e.g., ion exchange, reverse osmosis, etc. (Specify in Comments)
M079	Aqueous inorganic treatment - type unknown
AQUEOUS ORGANIC TREATMENT	
M081	Biological treatment
M082	Carbon adsorption
M083	Air/steam stripping
M084	Wet air oxidation
M085	Other aqueous organic treatment (Specify in Comments)
M089	Aqueous organic treatment - type unknown
AQUEOUS ORGANIC AND INORGANIC TREATMENT	
M091	Chemical precipitation in combination with biological treatment
M092	Chemical precipitation in combination with carbon adsorption
M093	Wet air oxidation
M094	Other organic/inorganic treatment (Specify in Comments)
M099	Aqueous organic and inorganic treatment - type unknown
SLUDGE TREATMENT	
M101	Sludge dewatering
M102	Addition of excess lime
M103	Absorption/adsorption
M104	Solvent extraction
M109	Sludge treatment - type unknown

SYSTEM TYPE CODES
(Continued)

Code	System type	Code	System type

STABILIZATION

M111	Stabilization/Chemical fixation using cementitious and/or pozzolanic materials
M112	Other stabilization (Specify in Comments)
M119	Stabilization - type unknown

OTHER TREATMENT

M121	Neutralization only
M122	Evaporation only
M123	Settling/clarification only
M124	Phase separation (e.g., emulsion breaking, filtration) only
M125	Other treatment (Specify in Comments)
M129	Other treatment - type unknown

DISPOSAL

M131	Land treatment/application/farming
M132	Landfill
M133	Surface impoundment (to be closed as a landfill)
M134	Deepwell/underground injection
M135	Direct discharge to sewer/POTW (no prior treatment)
M136	Direct discharge to surface water under NPDES (no prior treatment)
M137	Other disposal (Specify in Comments)

TRANSFER FACILITY STORAGE

M141	Transfer facility storage, waste was shipped off site with no on-site TDR activity

APPENDIX B

EPA HAZARDOUS WASTE CODES

EPA HAZARDOUS WASTE CODES

Code	Waste description
CHARACTERISTICS OF HAZARDOUS WASTE	
D001	Ignitable waste
D002	Corrosive waste
D003	Reactive waste
D004	Arsenic
D005	Barium
D006	Cadmium
D007	Chromium
D008	Lead
D009	Mercury
D010	Selenium
D011	Silver
D012	Endrin(1,2,3,4,10,10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo, endo-5,8-dimeth-ano-naphthalene)
D013	Lindane (1,2,3,4,5,6-hexa-chlorocyclohexane, gamma isomer)
D014	Methoxychlor (1,1,1-trichloro-2,2-bis [p-methoxyphenyl] ethane)
D015	Toxaphene (C_{10} H_{10} Cl_8, Technical chlorinated camphene, 67-69 percent chlorine)
D016	2,4-D (2,4-Dichlorophenoxyacetic acid)
D017	2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)
D018	Benzene
D019	Carbon tetrachloride
D020	Chlordane
D021	Chlorobenzene
D022	Chloroform
D023	o-Cresol
D024	m-Cresol
D025	p-Cresol
D026	Cresol
D027	1,4-Dichlorobenzene
D028	1,2-Dichloroethane
D029	1,1-Dichloroethylene
D030	2,4-Dinitrotoluene
D031	Heptachlor (and its epoxide)
D032	Hexachlorobenzene
D033	Hexachlorobutadiene
D034	Hexachloroethane
D035	Methyl ethyl ketone
D036	Nitrobenzene
D037	Pentachlorophenol
D038	Pyridine
D039	Tetrachloroethylene
D040	Trichlorethylene
D041	2,4,5-Trichlorophenol
D042	2,4,6-Trichlorophenol
D043	Vinyl chloride

EPA HAZARDOUS WASTE CODES
(Continued)

Code	Waste description
HAZARDOUS WASTE FROM NONSPECIFIC SOURCES	
F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichlorethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2, trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F003	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/ blends containing, before use, only the above spent nonhalogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above nonhalogenated solvents, and a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F004	The following spent nonhalogenated solvents: cresols, cresylic acid, and nitrobenzene; and the still bottoms from the recovery of these solvents; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above nonhalogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F005	The following spent nonhalogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above nonhalogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc, and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.
F007	Spent cyanide plating bath solutions from electroplating operations.
F008	Plating bath residues from the bottom of plating baths from electroplating operations in which cyanides are used in the process.
F009	Spent stripping and cleaning bath solutions from electroplating operations in which cyanides are used in the process.

Code	Waste description
F010	Quenching bath residues from oil baths from metal heat treating operations in which cyanides are used in the process.
F011	Spent cyanide solutions from slat bath pot cleaning from metal heat treating operations.
F012	Quenching wastewater treatment sludges from metal heat treating operations in which cyanides are used in the process.
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.
F020	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol.)
F021	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce derivatives.
F022	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.
F023	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating porcess) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol.)
F024	Process wastes including, but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludge, spent catalysts, and wastes listed in Sections 261.31. or 261.32)
F025	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one, to and including five, with varying amounts and positions of chlorine substitution.
F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.

EPA HAZARDOUS WASTE CODES
(Continued)

Code	Waste description
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.)
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA hazardous waste nos. F020, F021, F022, F023, F026, and F027.
F032	Wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use, or have previously used, chlorophenolic formulations [except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with Section 261.35 (i.e., the newly promulgated equipment cleaning or replacement standards), and where the generator does not not resume or initiate use of chlorophenolic formulations]. (This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.)
F034	Wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.
F035	Wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.
F037	Petroleum refinery primary oil/water/solids separation sludge - Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and storm water units receiving dry weather flow. Sludges generated in storm water units that do not receive dry weather flow, sludges generated in aggressive biological treatment units as defined in Section 261.31(b)(2)(including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units), and K051 wastes are exempted from this listing.
F038	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge - Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated in aggressive biological

Code	Waste description
	treatment units as defined in Section 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units), and F037, K048, and K051 wastes are exempted from this listing.
F039	Leachate resulting from the treatment, storage, or disposal of wastes classified by more than one waste code under Subpart D, or from a mixture of wastes classified under Subparts C and D of this part. (Leachate resulting from the management of one or more of the following EPA Hazardous Wastes and no other hazardous wastes retains its hazardous waste code(s): F020, F021, F022, F023, F026, F027, and/or F028.)
HAZARDOUS WASTE FROM SPECIFIC SOURCES	
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.
K003	Wastewater treatment sludge from the production of molybdate orange pigments.
K004	Wastewater treatment sludge from the production of zinc yellow pigments.
K005	Wastewater treatment sludge from the production of chrome green pigments.
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).
K007	Wastewater treatment sludge from the production of iron blue pigments.
K008	Oven residue from the production of chrome oxide green pigments.
K009	Distillation bottoms from the production of acetaldehyde from ethylene.
K010	Distillation side cuts from the production of acetaldehyde from ethylene.
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile.
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile.
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile.
K015	Still bottoms from the distillation of benzyl chloride.
K016	Heavy ends or distillation residues from the production of carbon tetrachloride.
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.
K018	Heavy ends from the fractionation column in ethyl chloride production.
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.
K021	Aqueous spent antimony catalyst waste from fluoromethane production.
K022	Distillation bottom tars from the production of phenol/acetone from cumene.
K023	Distillation light ends from the production of phthalic anhydride from naphthalene.

EPA HAZARDOUS WASTE CODES
(Continued)

Code	Waste description
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene.
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.
K026	Stripping still tails from the production of methyl ethyl pyridines.
K027	Centrifuge and distillation residues from toluene diisocyanate production.
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.
K031	By-product salts generated in the production of MSMA and cacodylic acid.
K032	Wastewater treatment sludge from the production of chlordane.
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.
K035	Wastewater treatment sludges generated in the production of creosote.
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton.
K037	Wastewater treatment sludges from the production of disulfoton.
K038	Wastewater from the washing and stripping of phorate production.
K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.
K040	Wastewater treatment sludge from the production of phorate.
K041	Wastewater treatment sludge from the production of toxaphene.
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.
K043	2,6-dichlorophenol waste from the production of 2,4-D.
K044	Wastewater treatment sludges from the manufacturing and processing of explosives.
K045	Spent carbon from the treatment of wastewater containing explosives.
K046	Wastewater treatment sludges from the manufacturing, formulation, and loading of lead-based initiating compounds.
K047	Pink/red water from TNT operations.
K048	Dissolved air flotation (DAF) float from the petroleum refining industry.
K049	Slop oil emulsion solids from the petroleum refining industry.
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry.
K051	API separator sludge from the petroleum refining industry.
K052	Tank bottoms (leaded) from the petroleum refining industry.
K060	Ammonia still lime sludge from coking operations.

Code	Waste description
K061	Emission control dust/sludge from the primary production of steel in electric furnaces.
K062	Spent pickle liquor from steel finishing operations of plants that produce iron or steel.
K064	Acid plant blowdown slurry/sludge resulting from the thickening of blowdown slurry from primary copper production.
K065	Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities.
K066	Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production.
K069	Emission control dust/sludge from secondary lead smelting.
K071	Brine purification muds from the mercury cell process in chlorine production, in which separately prepurified brine is not used.
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.
K083	Distillation bottoms from aniline production.
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes.
K086	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.
K087	Decanter tank tar sludge from coking operations.
K088	Spent potliners from primary aluminum reduction.
K090	Emission control dust or sludge from ferrochromiumsilicon production.
K091	Emission control dust or sludge from ferrochromium production.
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene.
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.
K095	Distillation bottoms from the production of 1,1,1-trichloroethane.
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.
K098	Untreated process wastewater from the production of toxaphene.
K099	Untreated wastewater from the production of 2,4-D.
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.

EPA HAZARDOUS WASTE CODES
(Continued)

Code	Waste description
K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.
K102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.
K103	Process residues from aniline extraction from the production of aniline.
K104	Combined wastewaters generated from nitrobenzene/aniline production.
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.
K106	Wastewater treatment sludge from the mercury cell process in chlorine production.
K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.
K108	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine from carboxylic acid hydrazides.
K109	Spent filter cartridges from product purification from the product of 1,1-dimethylhydrazine from carboxylic acid hydrazides.
K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine from carboxylic acid hydrazides.
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene.
K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.
K113	Condensed liquid light ends from purification of toluenediamine in production of toluenediamine via hydrogenation of dinitrotoluene.
K114	Vicinals from the purification of toluenediamine in production of toluenediamine via hydrogenation of dinitrotoluene.
K115	Heavy ends from purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.
K118	Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.
K123	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts.
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.
K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.

Code	Waste description
K126	Baghouse dust and floor sweepings in milling and packaging operations from production or formulation of ethylenebisdithiocarbamic acid and its salts.
K131	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.
K132	Spent absorbent and wastewater separator solids from the production of methyl bromide.
K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.
K141	Process residues from the recovery of coal tar, including, but not limited to, tar collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank sludge from coking operations).
K142	Tank storage residues from the production of coke from coal or from the recovery of coke by-products from coal.
K143	Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.
K144	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.
K145	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.
K147	Tar storage residues from coal tar refining.
K148	Residues from coal tar distillation, including, but not limited to, still bottoms.
K149	Distillation bottoms from the production of alpha (or methyl-) chlorinated tolunes, ring-chlorinated tolunes, benzoyl chlorides, and compounds with mixtures of these functional groups. [This waste does not include still bottoms from the distillation of benzoyl chloride]
K150	Organic residules excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha (or methyl-) chlorinated tolunes, benzoyl chlorides, and compounds with mixtures of these functional groups.
K151	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha (or methyl-) chlorinated tolunes, benzoyl chlorides, and compounds with mixtures of these functional groups.

DISCARDED COMMERCIAL CHEMICAL PRODUCTS, OFF-SPECIFICATION SPECIES, CONTAINER RESIDUALS, AND SPILL RESIDUES THEREOF--ACUTE HAZARDOUS WASTE

(AN ALPHABETIZED LISTING CAN BE FOUND AT 40 CFR 261.33.)

P001	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%
P001	Warfarin, & salts, when present at concentrations greater than 0.3%
P002	1-Acetyl-2-thiourea
P002	Acetamide, N-(aminothioxomethyl)-

EPA HAZARDOUS WASTE CODES
(Continued)

Code	Waste description
P003	2-Propenal
P003	Acrolein
P004	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha, 4alpha, 4abeta, 5alpha, 8alpha, 8abeta)
P004	Aldrin
P005	2-Propen-1-ol
P005	Allyl alcohol
P006	Aluminum phosphide (R,T)
P007	3(2H)-Isoxazolone, 5-(aminomethyl)-
P007	5-(Aminomethyl)-3-isoxazolol
P008	4-Aminopyridine
P008	4-Pyridinamine
P009	Ammonium picrate (R)
P009	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P010	Arsenic acid H_3AsO_4
P011	Arsenic oxide As_2O_5
P011	Arsenic pentoxide
P012	Arsenic oxide As_2O_3
P012	Arsenic trioxide
P013	Barium cyanide
P014	Benzenethiol
P014	Thiophenol
P015	Beryllium
P016	Dichloromethyl ether
P016	Methane, oxybis[chloro-
P017	2-Propanone, 1-bromo-
P017	Bromoacetone
P018	Brucine
P018	Strychnidin-10-one, 2,3-dimethoxy-
P020	Dinoseb
P020	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P021	Calcium cyanide
P021	Calcium cyanide $Ca(CN)_2$
P022	Carbon disulfide
P023	Acetaldehyde, chloro-
P023	Chloroacetaldehyde
P024	Benzenamine, 4-chloro-
P024	p-Chloraniline
P026	1-(o-Chlorophenyl)thiourea
P026	Thiourea, (2-chlorophenyl)-
P027	3-Chloropropionitrile
P027	Propanenitrile, 3-chloro-
P028	Benzene, (chloromethyl)-
P028	Benzyl chloride
P029	Copper cyanide
P029	Copper cyanide Cu(CN)
P030	Cyanides (soluble cyanide salts), not otherwise specified
P031	Cyanogen

Code	Waste description
P031	Ethanedinitrile
P033	Cyanogen chloride
P033	Cyanogen chloride (CN)Cl
P034	2-Cyclohexyl-4,6-dinitrophenol
P034	Phenol, 2-cyclohexyl-4,6-dinitro-
P036	Arsonous dichloride, phenyl-
P036	Dichlorophenylarsine
P037	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha, 2beta, 2aalpha, 3beta, 6beta, 6aalpha, 7beta, 7aalpha)-
P037	Dieldrin
P038	Arsine, diethyl-
P038	Diethylarsine
P039	Disulfoton
P039	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
P040	O,O-Diethyl O-pyrazinyl phosphorothioate
P040	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P041	Diethyl-p-nitrophenyl phosphate
P041	Phosphoric acid, diethyl 4-nitrophenyl ester
P042	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-
P042	Epinephrine
P043	Diisopropylfluorophosphate (DFP)
P043	Phosphorofluoridic acid, bis(1-methylethyl) ester
P044	Dimethoate
P044	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
P045	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[methylamino)carbonyl] oxime
P045	Thiofanox
P046	alpha,alpha-Dimethylphenethylamine
P046	Benzeneethanamine, alpha, alpha-dimethyl-
P047	4,6-Dinitro-o-cresol, & salts
P047	Phenol, 2-methyl-4,6-dinitro-, & salts
P048	2,4-Dinitrophenol
P048	Phenol, 2,4-dinitro-
P049	Dithiobiuret
P049	Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$
P050	6,9-Methano-2,4,3-benzodioxathiepin,6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-,3-oxide
P050	Endosulfan
P051	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha, 2beta, 2abeta, 3alpha, 6alpha, 6abeta, 7beta, 7aalpha)- & metabolites
P051	Endrin
P051	Endrin, & metabolites
P054	Aziridine

EPA HAZARDOUS WASTE CODES
(Continued)

Code	Waste description
P054	Ethyleneimine
P056	Fluorine
P057	Acetamide, 2-fluoro-
P057	Fluoroacetamide
P058	Acetic acid, fluoro-, sodium salt
P058	Fluoroacetic acid, sodium salt
P059	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P059	Heptachlor
P060	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha, 4alpha, 4abeta, 5beta, 8beta, 8abeta)-
P060	Isodrin
P062	Hexaethyl tetraphosphate
P062	Tetraphosphoric acid, hexaethyl ester
P063	Hydrocyanic acid
P063	Hydrogen cyanide
P064	Methane, isocyanato-
P064	Methyl isocyanate
P065	Fulminic acid, mercury(2+) salt (R,T)
P065	Mercury fulminate (R,T)
P066	Ethanimidothioic acid, N-[[(methylamino)carbonyl]oxy]-, methyl ester
P066	Methomyl
P067	1,2-Propylenimine
P067	Aziridine, 2-methyl-
P068	Hydrazine, methyl-
P068	Methyl hydrazine
P069	2-Methyllactonitrile
P069	Propanenitrile, 2-hydroxy-2-methyl-
P070	Aldicarb
P070	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
P071	Methyl parathion
P071	Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester
P072	alpha-Naphthylthiourea
P072	Thiourea, 1-naphthalenyl-
P073	Nickel carbonyl
P073	Nickel carbonyl $Ni(CO)_4$, (T-4)-
P074	Nickel cyanide
P074	Nickel cyanide $Ni(CN)_2$
P075	Nicotine, & salts
P075	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-,(S)-, & salts
P076	Nitric oxide
P076	Nitrogen oxide NO
P077	Benzenamine, 4-nitro-
P077	p-Nitroaniline
P078	Nitrogen dioxide
P078	Nitrogen oxide NO_2

Code	Waste description
P081	1,2,3-Propanetriol, trinitrate (R)
P081	Nitroglycerine (R)
P082	Methanimine, N-methyl-N-nitroso-
P082	N-Nitrosodimethylamine
P084	N-Nitrosomethylvinylamine
P084	Vinylamine, N-methyl-N-nitroso-
P085	Diphosphoramide, octamethyl-
P085	Octamethylpyrophosphoramide
P087	Osmium oxide OsO_4, (T-4)-
P087	Osmium tetroxide
P088	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P088	Endothall
P089	Parathion
P089	Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl) ester
P092	Mercury, (acetato-O)phenyl-
P092	Phenylmercury acetate
P093	Phenylthiourea
P093	Thiourea, phenyl-
P094	Phorate
P094	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester
P095	Carbonic dichloride
P095	Phosgene
P096	Hydrogen phosphide
P096	Phosphine
P097	Famphur
P097	Phosphorothioic acid O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester
P098	Potassium cyanide
P098	Potassium cyanide K(CN)
P099	Argentate (1-), bis(cyano-C)-, potassium
P099	Potassium silver cyanide
P101	Ethyl cyanide
P101	Propanenitrile
P102	2-Propyn-1-ol
P102	Propargyl alcohol
P103	Selenourea
P104	Silver cyanide
P104	Silver cyanide Ag(CN)
P105	Sodium azide
P106	Sodium cyanide
P106	Sodium cyanide Na(CN)
P107	Strontium sulfide SrS
P108	Strychnidin-10-one, & salts
P108	Strychnine, & salts
P109	Tetraethyldithiopyrophosphate
P109	Thiodiphosphoric acid, tetraethyl ester
P110	Plumbane, tetraethyl-

EPA HAZARDOUS WASTE CODES
(Continued)

Code	Waste description
P110	Tetraethyl lead
P111	Diphosphoric acid, tetraethyl ester
P111	Tetraethyl pyrophosphate
P112	Methane, tetranitro- (R)
P112	Tetranitromethane (R)
P113	Thallic oxide
P113	Thallium oxide Tl_2O_3
P114	Selenious acid, dithallium (1+) salt
P114	Thallium(I) selenite
P115	Sulfuric acid, dithallium (1+) salt
P115	Thallium(I) sulfate
P116	Hydrazinecarbothioamide
P116	Thiosemicarbazide
P118	Methanethiol, trichloro-
P118	Trichloromethanethiol
P119	Ammonium vanadate
P119	Vanadic acid, ammonium salt
P120	Vanadium oxide V_2O_5
P120	Vanadium pentoxide
P121	Zinc cyanide
P121	Zinc cyanide $Zn(CN)_2$
P122	Zinc phosphide Zn_3P_2, when present at concentrations greater than 10% (R,T)
P123	Toxaphene

DISCARDED COMMERCIAL CHEMICAL PRODUCTS, OFF-SPECIFICATION SPECIES, CONTAINER RESIDUES, AND SPILL RESIDUES THEREOF--TOXIC WASTES

(AN ALPHABETIZED LISTING CAN BE FOUND AT 40 CFR 261.33.)

Code	Waste description
See F027	2,3,4,6-Tetrachlorophenol
	2,4,5-T
	2,4,5-Trichlorophenol
	2,4,6-Trichlorophenol
	Acetic acid, (2,4,5-trichlorophenoxy)-
	Pentachlorophenol
	Phenol, 2,3,4,6-tetrachloro-
	Phenol, 2,4,5-trichloro-
	Phenol, 2,4,6-trichloro-
	Phenol, pentachloro-
	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-
	Silvex (2,4,5-TP)
U001	Acetaldehyde (I)
U001	Ethanal (I)
U002	2-Propanone (I)
U002	Acetone (I)
U003	Acetonitrile (I,T)
U004	Acetophenone
U004	Ethanone, 1-phenyl-

Code	Waste description
U005	2-Acetylaminofluorene
U005	Acetamide, N-9H-fluoren-2-yl
U006	Acetyl chloride (C,R,T)
U007	2-Propenamide
U007	Acrylamide
U008	2-Propenoic acid (I)
U008	Acrylic acid (I)
U009	2-Propenenitrile
U009	Acrylonitrile
U010	Azirino [2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta, 8aalpha, 8balpha)]-
U010	Mitomycin C
U011	1H-1,2,4-Triazol-3-amine
U011	Amitrole
U012	Aniline (I,T)
U012	Benzenamine (I,T)
U014	Auramine
U014	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl-
U015	Azaserine
U015	L-Serine, diazoacetate (ester)
U016	Benz[c]acridine
U017	Benzal chloride
U017	Benzene, (dichloromethyl)-
U018	Benz[a]anthracene
U019	Benzene (I,T)
U020	Benzenesulfonic acid chloride (C,R)
U020	Benzenesulfonyl chloride (C,R)
U021	[1,1'-Biphenyl]-4,4'-diamine
U021	Benzidine
U022	Benzo[a]pyrene
U023	Benzene, (trichloromethyl)-
U023	Benzotrichloride (C,R,T)
U024	Dichloromethoxy ethane
U024	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
U025	Dichloroethyl ether
U025	Ethane, 1,1'-oxybis[2-chloro-
U026	Chlornaphazin
U026	Naphthalenamine, N,N'-bis(2-chloroethyl)-
U027	Dichloroisopropyl ether
U027	Propane, 2,2'-oxybis[2-chloro-
U028	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
U028	Diethylhexyl phthalate
U029	Methane, bromo-
U029	Methyl bromide
U030	4-Bromophenyl phenyl ether

EPA HAZARDOUS WASTE CODES
(Continued)

Code	Waste description
U030	Benzene, 1-bromo-4-phenoxy-
U031	1-Butanol (I)
U031	n-Butyl alcohol (I)
U032	Calcium chromate
U032	Chromic acid H_2CrO_4, calcium salt
U033	Carbon oxyfluoride (R,T)
U033	Carbonic difluoride
U034	Acetaldehyde, trichloro-
U034	Chloral
U035	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-
U035	Chlorambucil
U036	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-
U036	Chlordane, alpha & gamma isomers
U037	Benzene, chloro-
U037	Chlorobenzene
U038	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester
U038	Chlorobenzilate
U039	p-Chloro-m-cresol
U039	Phenol, 4-chloro-3-methyl-
U041	Epichlorohydrin
U041	Oxirane, (chloromethyl)-
U042	2-Chloroethyl vinyl ether
U042	Ethene, (2-chloroethoxy)-
U043	Ethene, chloro-
U043	Vinyl chloride
U044	Chloroform
U044	Methane, trichloro-
U045	Methane, chloro- (I,T)
U045	Methyl chloride (I,T)
U046	Chloromethyl methyl ether
U046	Methane, chloromethoxy-
U047	beta-Chloronaphthalene
U047	Naphthalene, 2-chloro-
U048	o-Chlorophenol
U048	Phenol, 2-chloro-
U049	4-Chloro-o-toluidine, hydrochloride
U049	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U050	Chrysene
U051	Creosote
U052	Cresol (Cresylic acid)
U052	Phenol, methyl-
U053	2-Butenal
U053	Crotonaldehyde
U055	Benzene, (1-methylethyl)- (I)
U055	Cumene (I)
U056	Benzene, hexahydro- (I)
U056	Cyclohexane (I)

Code	Waste description
U057	Cyclohexanone (I)
U058	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide
U058	Cyclophosphamide
U059	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-
U059	Daunomycin
U060	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-
U060	DDD
U061	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-
U061	DDT
U062	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester
U062	Diallate
U063	Dibenz[a,h]anthracene
U064	Benzo[rst]pentaphene
U064	Dibenzo[a,i]pyrene
U066	1,2-Dibromo-3-chloropropane
U066	Propane, 1,2-dibromo-3-chloro-
U067	Ethane, 1,2-dibromo-
U067	Ethylene dibromide
U068	Methane, dibromo-
U068	Methylene bromide
U069	1,2-Benzenedicarboxylic acid, dibutyl ester
U069	Dibutyl phthalate
U070	Benzene, 1,2-dichloro-
U070	o-Dichlorobenzene
U071	Benzene, 1,3-dichloro-
U071	m-Dichlorobenzene
U072	Benzene, 1,4-dichloro-
U072	p-Dichlorobenzene
U073	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-
U073	3,3'-Dichlorobenzidine
U074	1,4-Dichloro-2-butene (I,T)
U074	2-Butene, 1,4-dichloro- (I,T)
U075	Dichlorodifluoromethane
U075	Methane, dichlorodifluoro-
U076	Ethane, 1,1-dichloro-
U076	Ethylidene dichloride
U077	Ethane, 1,2-dichloro-
U077	Ethylene dichloride
U078	1,1-Dichloroethylene
U078	Ethene, 1,1-dichloro-
U079	1,2-Dichloroethylene
U079	Ethene, 1,2-dichloro-,(E)-
U080	Methane, dichloro-
U080	Methylene chloride
U081	2,4-Dichlorophenol

EPA HAZARDOUS WASTE CODES
(Continued)

Code	Waste description
U081	Phenol, 2,4-dichloro-
U082	2,6-Dichlorophenol
U082	Phenol, 2,6-dichloro-
U083	Propane, 1,2-dichloro-
U083	Propylene dichloride
U084	1,3-Dichloropropene
U084	1-Propene, 1,3-dichloro-
U085	1,2:3,4-Diepoxybutane (I,T)
U085	2,2'-Bioxirane
U086	Hydrazine, 1,2-diethyl-
U086	N,N'-Diethylhydrazine
U087	O,O-Diethyl S-methyl dithiophosphate
U087	Phosphorodithioic acid, O,O-diethyl S-methyl ester
U088	1,2-Benzenedicarboxylic acid, diethyl ester
U088	Diethyl phthalate
U089	Diethylstilbesterol
U089	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis, (E)-
U090	1,3-Benzodioxole, 5-propyl-
U090	Dihydrosafrole
U091	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-
U091	3,3'-Dimethoxybenzidine
U092	Dimethylamine (I)
U092	Methanamine, N-methyl- (I)
U093	Benzenamine, N,N-dimethyl-4-(phenylazo)-
U093	p-Dimethylaminoazobenzene
U094	7,12-Dimethylbenz[a]anthracene
U094	Benz[a]anthracene, 7,12-dimethyl-
U095	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-
U095	3,3'-Dimethylbenzidine
U096	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U096	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U097	Carbamic chloride, dimethyl-
U097	Dimethylcarbamoyl chloride
U098	1,1-Dimethylhydrazine
U098	Hydrazine, 1,1-dimethyl-
U099	1,2-Dimethylhydrazine
U099	Hydrazine, 1,2-diphenyl-
U101	2,4-Dimethylphenol
U101	Phenol, 2,4-dimethyl-
U102	1,2-Benzenedicarboxylic acid, dimethyl ester
U102	Dimethyl phthalate
U103	Dimethyl sulfate
U103	Sulfuric acid, dimethyl ester
U105	2,4-Dinitrotoluene
U105	Benzene, 1-methyl-2,4-dinitro-

Code	Waste description
U106	2,6-Dinitrotoluene
U106	Benzene, 2-methyl-1,3-dinitro-
U107	1,2-Benzenedicarboxylic acid, dioctyl ester
U107	Di-n-octyl phthalate
U108	1,4-Diethyleneoxide
U108	1,4-Dioxane
U109	1,2-Diphenylhydrazine
U109	Hydrazine, 1,2-diphenyl-
U110	1-Propanimine, N-propyl-(I)
U110	Dipropylamine (I)
U111	1-Propanamine, N-nitroso-N-propyl-
U111	Di-n-propylnitrosamine
U112	Acetic acid, ethyl ester (I)
U112	Ethyl acetate (I)
U113	2-Propenoic acid, ethyl ester (I)
U113	Ethyl acrylate (I)
U114	Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters
U114	Ethylenebisdithiocarbamic acid, salts & esters
U115	Ethylene oxide (I,T)
U115	Oxirane (I,T)
U116	2-Imidazolidinethione
U116	Ethylenethiourea
U117	Ethane, 1,1'-oxybis-(I)
U117	Ethyl ether (I)
U118	2-Propenoic acid, 2-methyl-, ethyl ester
U118	Ethyl methacrylate
U119	Ethyl methanesulfonate
U119	Methanesulfonic acid, ethyl ester
U120	Fluoranthene
U121	Methane, trichlorofluoro-
U121	Trichloromonofluoromethane
U122	Formaldehyde
U123	Formic acid (C,T)
U124	Furan (I)
U124	Furfuran (I)
U125	2-Furancarboxaldehyde (I)
U125	Furfural (I)
U126	Glycidylaldehyde
U126	Oxiranecarboxyaldehyde
U127	Benzene, hexachloro-
U127	Hexachlorobenzene
U128	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U128	Hexachlorobutadiene
U129	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha, 2alpha, 3beta, 4alpha, 5alpha, 6beta)-
U129	Lindane
U130	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-

EPA HAZARDOUS WASTE CODES
(Continued)

Code	Waste description
U130	Hexachlorocyclopentadiene
U131	Ethane, hexachloro-
U131	Hexachloroethane
U132	Hexachlorophene
U132	Phenol, 2,2'-methylenebis[3,4,6-trichloro-
U133	Hydrazine (R,T)
U134	Hydrofluoric acid (C,T)
U134	Hydrogen fluoride (C,T)
U135	Hydrogen sulfide
U135	Hydrogen sulfide H_2S
U136	Arsinic acid, dimethyl-
U136	Cacodylic acid
U137	Indeno[1,2,3-cd]pyrene
U138	Methane, iodo-
U138	Methyl iodide
U140	1-Propanol, 2-methyl- (I,T)
U140	Isobutyl alcohol (I,T)
U141	1,3-Benzodioxole, 5-(1-propenyl)-
U141	Isosafrole
U142	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-
U142	Kepone
U143	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z), 7(2S*,3R*), 7aalpha]]-
U143	Lasiocarpine
U144	Acetic acid, lead(2+) salt
U144	Lead acetate
U145	Lead phosphate
U145	Phosphoric acid, lead(2+) salt (2:3)
U146	Lead subacetate
U146	Lead, bis(acetato-O)tetrahydroxytri-
U147	2,5-Furandione
U147	Maleic anhydride
U148	3,6-Pyridazinedione, 1,2-dihydro-
U148	Maleic hydrazide
U149	Malononitrile
U149	Propanedinitrile
U150	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-
U150	Melphalan
U151	Mercury
U152	2-Propenenitrile, 2-methyl- (I,T)
U152	Methacrylonitrile (I,T)
U153	Methanethiol (I,T)
U153	Thiomethanol (I,T)
U154	Methanol (I)

Code	Waste description
U154	Methyl alcohol (I)
U155	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-
U155	Methapyrilene
U156	Carbonochloridic acid, methyl ester, (I,T)
U156	Methyl chlorocarbonate (I,T)
U157	3-Methylcholanthrene
U157	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U158	4,4'-Methylenebis(2-chloroaniline)
U158	Benzenamine, 4,4'-methylenebis[2-chloro-
U159	2-Butanone (I,T)
U159	Methyl ethyl ketone (MEK) (I,T)
U160	2-Butanone, peroxide (R,T)
U160	Methyl ethyl ketone peroxide (R,T)
U161	4-Methyl-2-pentanone (I)
U161	Methyl isobutyl ketone (I)
U161	Pentanol, 4-methyl-
U162	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U162	Methyl methacrylate (I,T)
U163	Guanidine, N-methyl-N'-nitro-N-nitroso-
U163	MNNG
U164	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U164	Methylthiouracil
U165	Naphthalene
U166	1,4-Naphthalenedione
U166	1,4-Naphthoquinone
U167	1-Napthalenamine
U167	alpha-Naphthylamine
U168	2-Napthalenamine
U168	beta-Naphthylamine
U169	Benzene, nitro-
U169	Nitrobenzene (I,T)
U170	p-Nitrophenol (I,T)
U170	Phenol, 4-nitro-
U171	2-Nitropropane (I,T)
U171	Propane, 2-nitro- (I,T)
U172	1-Butanamine, N-butyl-N-nitroso-
U172	N-Nitrosodi-n-butylamine
U173	Ethanol, 2,2'-(nitrosoimino)bis-
U173	N-Nitrosodiethanolamine
U174	Ethanamine, N-ethyl-N-nitroso-
U174	N-Nitrosodiethylamine
U176	N-Nitroso-N-ethylurea
U176	Urea, N-ethyl-N-nitroso-
U177	N-Nitroso-N-methylurea
U177	Urea, N-methyl-N-nitroso-
U178	Carbamic acid, methylnitroso-, ethyl ester

EPA HAZARDOUS WASTE CODES
(Continued)

Code	Waste description
U178	N-Nitroso-N-methylurethane
U179	N-Nitrosopiperidine
U179	Piperidine, 1-nitroso-
U180	N-Nitrosopyrrolidine
U180	Pyrrolidine, 1-nitroso-
U181	5-Nitro-o-toluidine
U181	Benzenamine, 2-methyl-5-nitro
U182	1,3,5-Trioxane, 2,4,6-trimethyl-
U182	Paraldehyde
U183	Benzene, pentachloro-
U183	Pentachlorobenzene
U184	Ethane, pentachloro-
U184	Pentachloroethane
U185	Benzene, pentachloronitro-
U185	Pentachloronitrobenzene (PCNB)
U186	1,3-Pentadiene (I)
U186	1-Methylbutadiene (I)
U187	Acetamide, N-(4-ethoxyphenyl)-
U187	Phenacetin
U188	Phenol
U189	Phosphorus sulfide (R)
U189	Sulfur phosphide (R)
U190	1,3-Isobenzofurandione
U190	Phthalic anhydride
U191	2-Picoline
U191	Pyridine, 2-methyl-
U192	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-
U192	Pronamide
U193	1,2-Oxathiolane, 2,2-dioxide
U193	1,3-Propane sultone
U194	1-Propanamine (I,T)
U194	n-Propylamine (I,T)
U196	Pyridine
U197	2,5-Cyclohexadiene-1,4-dione
U197	p-Benzoquinone
U200	Reserpine
U200	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta, 16beta, 17alpha, 18beta, 20alpha)-
U201	1,3-Benzenediol
U201	Resorcinol
U202	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, & salts
U202	Saccharin, & salts
U203	1,3-Benzodioxole, 5-(2-propenyl)-
U203	Safrole
U204	Selenious acid
U204	Selenium dioxide
U205	Selenium sulfide

Code	Waste description
U205	Selenium sulfide SeS_2 (R,T)
U206	D-Glucose, 2-deoxy-2-[[(methylnitrosoamino)-carbonyl]amino]-
U206	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-,D-
U206	Streptozotocin
U207	1,2,4,5-Tetrachlorobenzene
U207	Benzene, 1,2,4,5-tetrachloro-
U208	1,1,1,2-Tetrachloroethane
U208	Ethane, 1,1,1,2-tetrachloro-
U209	1,1,2,2-Tetrachloroethane
U209	Ethane, 1,1,2,2-tetrachloro-
U210	Ethene, tetrachloro-
U210	Tetrachloroethylene
U211	Carbon tetrachloride
U211	Methane, tetrachloro-
U213	Furan, tetrahydro-(I)
U213	Tetrahydrofuran (I)
U214	Acetic acid, thallium(1+) salt
U214	Thallium(I) acetate
U215	Carbonic acid, dithallium(1+) salt
U215	Thallium(I) carbonate
U216	Thallium chloride Tlcl
U216	Thallium(I) chloride
U217	Nitric acid, thallium(1+) salt
U217	Thallium(I) nitrate
U218	Ethanethioamide
U218	Thioacetamide
U219	Thiourea
U220	Benzene, methyl-
U220	Toluene
U221	Benzenediamine, ar-methyl-
U221	Toluenediamine
U222	Benzenamine, 2-methyl-, hydrochloride
U222	o-Toluidine hydrochloride
U223	Benzene, 1,3-diisocyanatomethyl- (R,T)
U223	Toluene diisocyanate (R,T)
U225	Bromoform
U225	Methane, tribromo-
U226	Ethane, 1,1,1-trichloro-
U226	Methyl chloroform
U227	1,1,2-Trichloroethane
U227	Ethane, 1,1,2-trichloro-
U228	Ethene, trichloro-
U228	Trichloroethylene
U234	1,3,5-Trinitrobenzene (R,T)
U234	Benzene, 1,3,5-trinitro-
U235	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U235	Tris(2,3,-dibromopropyl) phosphate

EPA HAZARDOUS WASTE CODES
(Continued)

Code	Waste description
U236	2,7-Naphthalenedisulfonic acid,3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt
U236	Trypan blue
U237	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U237	Uracil mustard
U238	Carbamic acid, ethyl ester
U238	Ethyl carbamate (urethane)
U239	Benzene, dimethyl- (I,T)
U239	Xylene (I)
U240	2,4-D, salts & esters
U240	Acetic acid, (2,4-dichlorophenoxy)-, salts & esters
U243	1-Propene, 1,1,2,3,3,3-hexachloro-
U243	Hexachloropropene
U244	Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2S_2$, tetramethyl-
U244	Thiram
U246	Cyanogen bromide (CN)Br
U247	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-
U247	Methoxychlor
U248	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations of 0.3% or less
U248	Warfarin, & salts, when present at concentrations of 0.3% or less
U249	Zinc phosphide Zn_3P_2, when present at concentrations of 10% or less
U328	Benzenamine, 2-methyl-
U328	o-Toluidine
U353	Benzenamine, 4-methyl-
U353	p-Toluidine
U359	Ethanol, 2-ethoxy-
U359	Ethylene glycol monoethyl ether