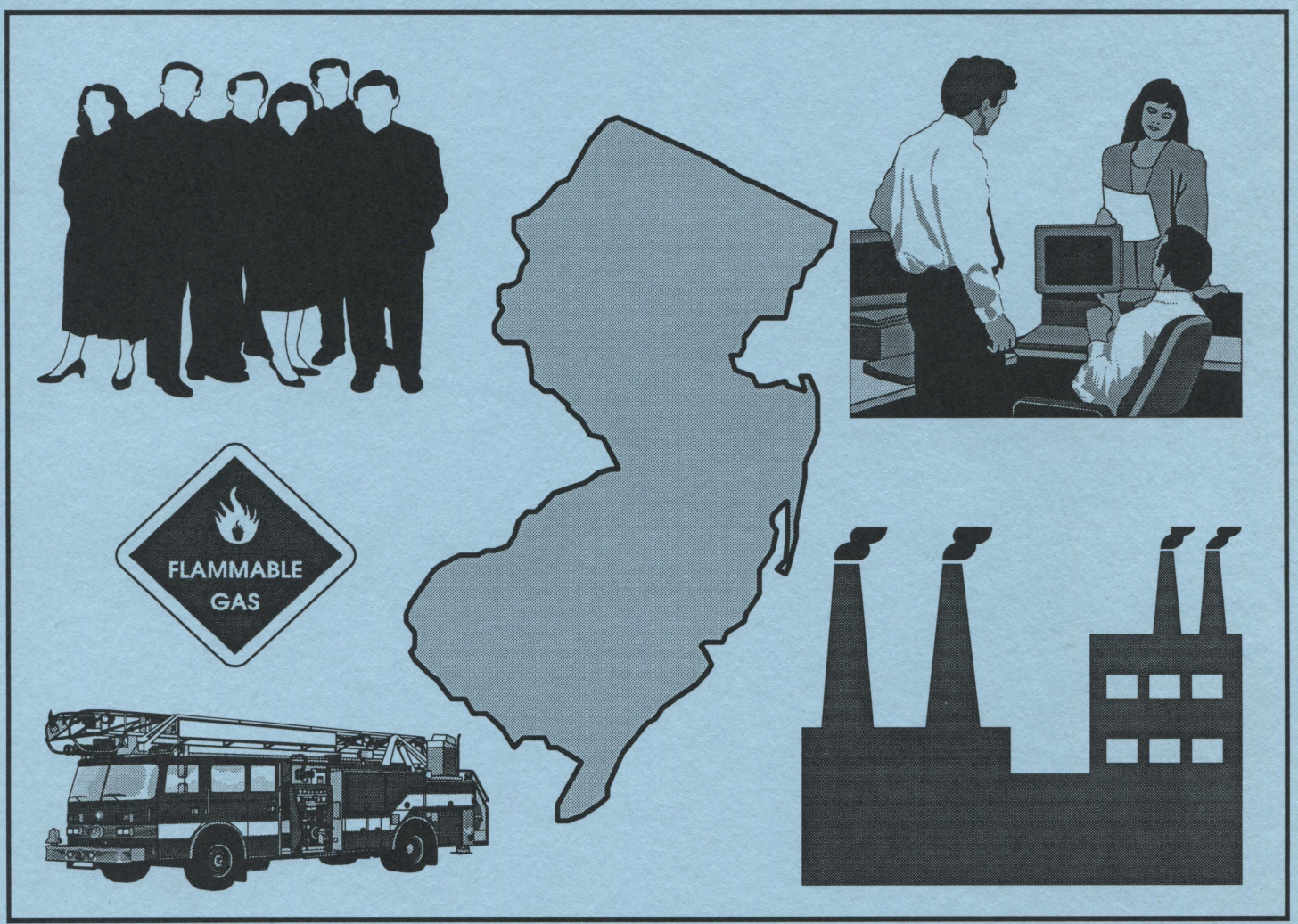
THE COMMUNITY RIGHT TO KNOW ANNUAL REPORT FOR SURVEY YEAR 1994



NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Chemical Release Information and Prevention

DECEMBER, 1996

Christine Todd Whitman, Governor
Robert C. Shinn, Jr., Commissioner

THE COMMUNITY RIGHT TO KNOW ANNUAL REPORT

for Reporting Year 1994

New Jersey Department of Environmental Protection
Policy and Planning
Division of Environmental Safety, Health and Analytical Programs
Release Prevention Element
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December, 1996

Christine Todd Whitman, Governor
Robert C. Shinn, Jr., Commissioner

State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection
Office of the Commissioner
CN-402
Trenton, NJ 08625

Robert C. Shinn, Jr
Commissione

December 30, 1996

Dear Friend,

I am pleased to present the Department of Environmental Protection's Community Right to Know Annual Report for the 1994 survey year. This report summarizes the 1994 chemical inventory and environmental release, off-site transfer, facility throughput and pollution prevention information reported by New Jersey companies pursuant to state and federal Right to Know laws in 1995.

The New Jersey Worker and Community Right to Know Act requires employers having certain Standard Industrial Classification (SIC) codes to report the environmental hazardous substances used, stored, or manufactured at their facilities. This information is collected annually on the Community Right to Know Survey sent to more than 33,000 employers. The state law and the federal Emergency Planning and Community Right to Know Act of 1986 (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act (SARA), also require about 700 manufacturing facilities meeting specific criteria to submit information concerning their environmental releases and pollution prevention activities. These data are summarized in this report.

In 1994, the Community Right to Know regulations were amended to make the information more timely, more accessible and more meaningful. The most significant program changes were the revision of the environmental hazardous substance list and the establishment of a threshold for chemical inventory reporting. The 1994 annual report reflects the new reporting requirements.

I hope you find the 1994 Community Right to Know Annual Report to be useful in increasing your awareness of the presence of hazardous substances in the state. The information presented in this report contributes to the protection of New Jersey's citizens and the environment.

Sincerely,

Robert C. Shinn, Jr.
Commissioner

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THE COMMUNITY RIGHT TO KNOW ANNUAL REPORT

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The Community Right to Know Annual Report

Introduction

The Community Right to Know program was established to provide the public with access to information concerning hazardous substances present in business facilities in New Jersey. New Jersey employers whose businesses are regulated by the New Jersey Worker and Community Right to Know (W&CRTK) Act and/or the federal Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986, also known as Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), are required to report inventories of the hazardous substances used, stored or manufactured at their facilities. Additionally, certain manufacturing sector facilities are mandated under these laws to report environmental release and off-site transfer data as well as information on pollution prevention activities for more than 340 specific toxic substances and the chemicals included in 22 chemical categories.

Information presented in this report is provided to the New Jersey Department of Environmental Protection (NJDEP) by private sector facilities on the department's Community Right to Know Survey (DEQ-094) and the Release and Pollution Prevention Report (DEQ-114), and on the federal Toxic Chemical Release Inventory Reporting Form (Form R). The information presented in this report summarizes the data collected by the department on these forms in March and July of 1995 for calendar year 1994.

Hazardous Substances Inventory

Businesses covered under the state and/or the federal Right to Know laws are required to report to the NJDEP their hazardous substances inventories on the Community Right to Know Survey (DEQ-094) by March 1 of each year. The inventory data summarized in this report were due on March 1, 1995 for calendar year 1994. The New Jersey Worker and Community Right to Know Act regulates employers by business activity, designated by a Standard Industrial Classification (SIC) code (see Appendix A for New Jersey regulated SIC codes). These businesses are likely to maintain inventories of hazardous substances.

Businesses not covered under the state law may still be required under Section 312 of EPCRA to report their chemical inventories if quantities of hazardous substances stored on site exceed the federal reporting thresholds. These businesses are also required to file their inventory information on the state reporting form (DEQ-094).

Emergency Planning

The federal Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), emergency planning sections (§ 301 - 303), was designed to develop state and local governments' emergency response and preparedness capabilities through better coordination and planning, especially within the local community. A pivotal step in the process is identifying facilities subject to the emergency planning provisions. All facility owners or operators, whether public or private, are required to notify the NJDEP if any chemical on the United States Environmental Protection Agency (USEPA) List of Extremely Hazardous Substances (approximately 360 chemicals) is present at the facility in excess of the chemical's threshold planning quantity (TPQ). Extremely Hazardous Substances are those chemicals likely to result in serious, irrevocable health effects if a release were to occur. Facilities that meet this requirement must notify the NJDEP and the Local Emergency Planning Committee (LEPC) that they are subject to these requirements within 60 days after they begin to manufacture, use or store any Extremely Hazardous Substance at or above the TPQ.

Toxic Chemical Release Inventory (TRI)

Section 313 of the federal EPCRA requires manufacturers classified in SIC codes 20 through 39, with 10 or more full-time employees, meeting the established thresholds for the manufacture (including import), process or otherwise use of any of the EPCRA Section 313 toxic chemicals to annually submit the Toxic Chemical Release Inventory Reporting Form (Form R). Facilities must submit the completed original Form R to the USEPA and a copy to the state emergency response commission (SERC) for the state where the facility is located. The NJDEP is delegated by the SERC to receive these forms. The Form R is due July 1 of each year following the reporting year and contains information for the previous calendar year. This information is summarized in the TRI section of this report. Although the 1994 Form R environmental release, off-site transfer and pollution prevention data are not presented in detail in this report, similar information on toxic chemicals is reported by industry on the New Jersey Release and Pollution Prevention Report (RPPR or DEQ-114) which is summarized in this report.

Release and Pollution Prevention Report

Facilities mandated to complete the federal Form R must also provide additional information to NJDEP regarding the EPCRA Section 313 toxic chemicals that are reported on Form R. These facilities are required to submit the New Jersey Release and Pollution Prevention Report (RPPR), as well as the Form R, by July 1 of every year. The RPPR is used to collect information for the Community Right to Know program and the Pollution Prevention program. Like the Form R, the information reported is for the previous calendar year. In addition to environmental release and off-site transfer data collected on Form R, the RPPR collects chemical throughput data (also referred to as chemical use or materials accounting information) and annual pollution prevention activity information. The NJDEP's Office of Pollution Prevention evaluates the data for potential applications to its goal of decreasing, if not eliminating, whenever possible, the amount of toxic chemicals produced, used, or generated as waste in the state. The Office of Pollution Prevention, which can be reached at 609-777-0518, then develops its own reports from the data.

General Discussion

New Jersey was one of the first states in the nation to mandate the collection of chemical inventory and environmental release data and to establish a mechanism for the promotion of public awareness of the information when the Worker and Community Right to Know Act was enacted in 1983. The state's goal is to assemble and disseminate information that will help the citizens, government, and industry of the state plan for and work toward a safer, cleaner New Jersey. To help accomplish this goal, the department, in cooperation with the New Jersey Department of Health and the New Jersey State Police, established the Right to Know Public Access System (RTKPAS) which provides direct access to the Right to Know (RTK) database via personal computer and modem. The RTKPAS can be accessed by dialing 609-633-6099. A users' manual is available to instruct interested persons on how to access the database. Copies of the manual can be obtained by calling 609-292-6714.

In 1994, the department adopted new rules that changed the reporting thresholds and the list of reportable environmental hazardous substances (EHSs) for inventory reporting. Beginning with reporting for calendar year 1994, covered employers reported substances based on a threshold of 500 pounds or the Threshold Planning Quantity (TPQ), whichever was less. The most significant changes to the list of substances subject to reporting were the removal of most substances on the US Department of Transportation Hazardous Materials Table and the addition of the substances defined at Section 112(r) of the federal Clean Air Act Amendments.

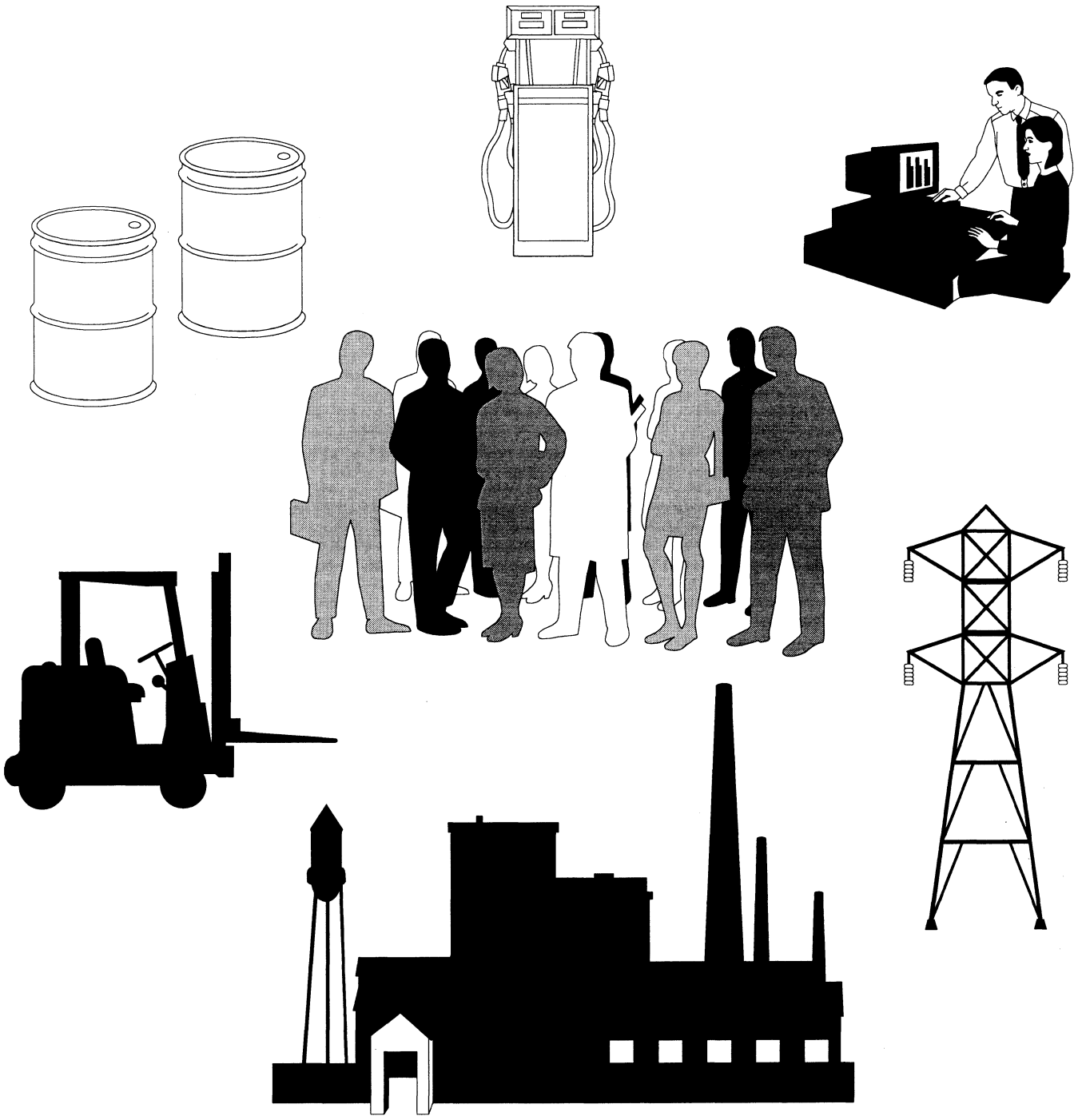
The Community Right to Know (CRTK) Survey for 1994 was sent to more than 33,000 regulated employers in the state. For the 1994 reporting year there was essentially no change in compliance for return of the CRTK Survey (91.5%) compared to 1993 and 1992. At the same time, the number of facilities reporting the presence of hazardous substances on site decreased slightly from 22,690 to 21,743. This is most likely due to the regulatory changes affecting reportable chemicals at the state threshold level (noted above).

Estimates of annual quantities of on-site releases to the environment and off-site transfers of select toxic chemicals found on the section 313 list of EPCRA were reported on the Form R by 673 facilities for the 1994 reporting year. These facilities reported more than 15.5 million pounds of on-site releases and 134.4 million pounds of off-site transfers for 1994 (according to Form R data). In comparison, for 1993, 718 facilities reported more than 21.6 million pounds of releases and more than 182.8 million pounds of transfers. See the sections on New Jersey's Release and Pollution Prevention Report and the 1994 Toxic Chemical Release Inventory for explanations of these numbers.

Annual reports enable citizens of New Jersey to become aware of the hazardous chemicals that are manufactured, processed, used, stored and released in the state. It is important to note that the data should not be used as an indicator of exposure, if any, of the public to the chemicals.

The Bureau of Chemical Release Information and Prevention can also be contacted directly at 609-292-6714 for further information about the RTK program or the Public Access System. If you would like information about a specific facility, municipality, county, chemical, etc., please use the request form found in Appendix B of this report.

COMMUNITY RIGHT TO KNOW SURVEY
FOR REPORTING YEAR 1994
HAZARDOUS SUBSTANCES INVENTORY SUMMARY



HAZARDOUS SUBSTANCES INVENTORY SUMMARY FOR 1994

As required by the New Jersey Worker and Community Right to Know (W&CRTK) Act, the 1994 New Jersey Community Right to Know Survey (DEQ-094) was mailed to approximately 33,200 employers to collect information about their chemical inventories during 1994. Surveys for approximately 92% of the facilities were accounted for, representing the same compliance rate as for the two previous reporting years.

In 1994, the NJDEP adopted new rules that changed the reporting requirements under Community Right to Know. Beginning with reporting year 1994, covered employers reported substances based on a threshold of 500 pounds or the EPCRA § 302 Threshold Planning Quantity (TPQ), whichever was less. The most significant changes to the list of substances subject to reporting were the removal of the US Department of Transportation Hazardous Materials Table and the addition of the substances defined at Section 112(r) of the federal Clean Air Act Amendments. Also, facilities were required to classify substances as "pure" or "mixture," not by a list of percentage compositions codes.

Figure 1 presents the number of facilities, by county, reporting any inventories of hazardous substances for the 1994 reporting year. Compared to 1993 reporting, there was a decrease in the number of facilities that reported chemical inventories in every county. This is most likely attributable to the regulatory changes that affected reporting for 1994. Once again, the fewest facilities reporting hazardous substance inventories (158) were found in Salem County while Bergen had the highest number of facilities (2,778) reporting inventories. Figure 2 depicts, by county, the number of facilities that reported one or more hazardous substances at a maximum daily amount above 50,000 pounds. These data include hazardous substances contained in a mixture or found in a pure form. The information presented in Figures 1 and 2 may be used to identify areas of the state where industry density, as well as chemical usage by industry, is the heaviest. These data do not necessarily indicate increased health risks or greater individual exposures to hazardous substances compared to any other region in the state.

For reporting year 1994, hazardous substance inventory data were submitted by approximately 21,000 facilities that reported more than 184,000 substance records, where a record represents a substance entry on the DEQ-094. Selected information has been extracted to produce two profiles of the data. Table 1 presents the top 35 most frequently reported substances above threshold, while Table 2 presents the top 35 most frequently reported substances in inventory quantities greater than 10,000 pounds.

In Table 1, the substances have been ranked in descending order by the number of times each substance was reported. These substances occur at any quantity, and may have been reported in pure form or in a mixture, as a raw material, as a finished product, as a waste, or used by a facility in its day-to-day operations, including heating or building maintenance. This table represents those substances that have a greater chance of being encountered in a facility covered by the NJ W&CRTK Act or the federal Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA).

In Table 2, the substances have been ranked in descending order by the number of times each substance was reported in inventories exceeding 10,000 pounds, either in a pure form or in a mixture. Table 2 indicates that the top 35 substances were reported at least 11,256 times at an inventory of greater than 10,000 pounds. Approximately 33,000 of the 184,000 substance records were reported without specific identifying numbers and, therefore, could not be included in these analyses.

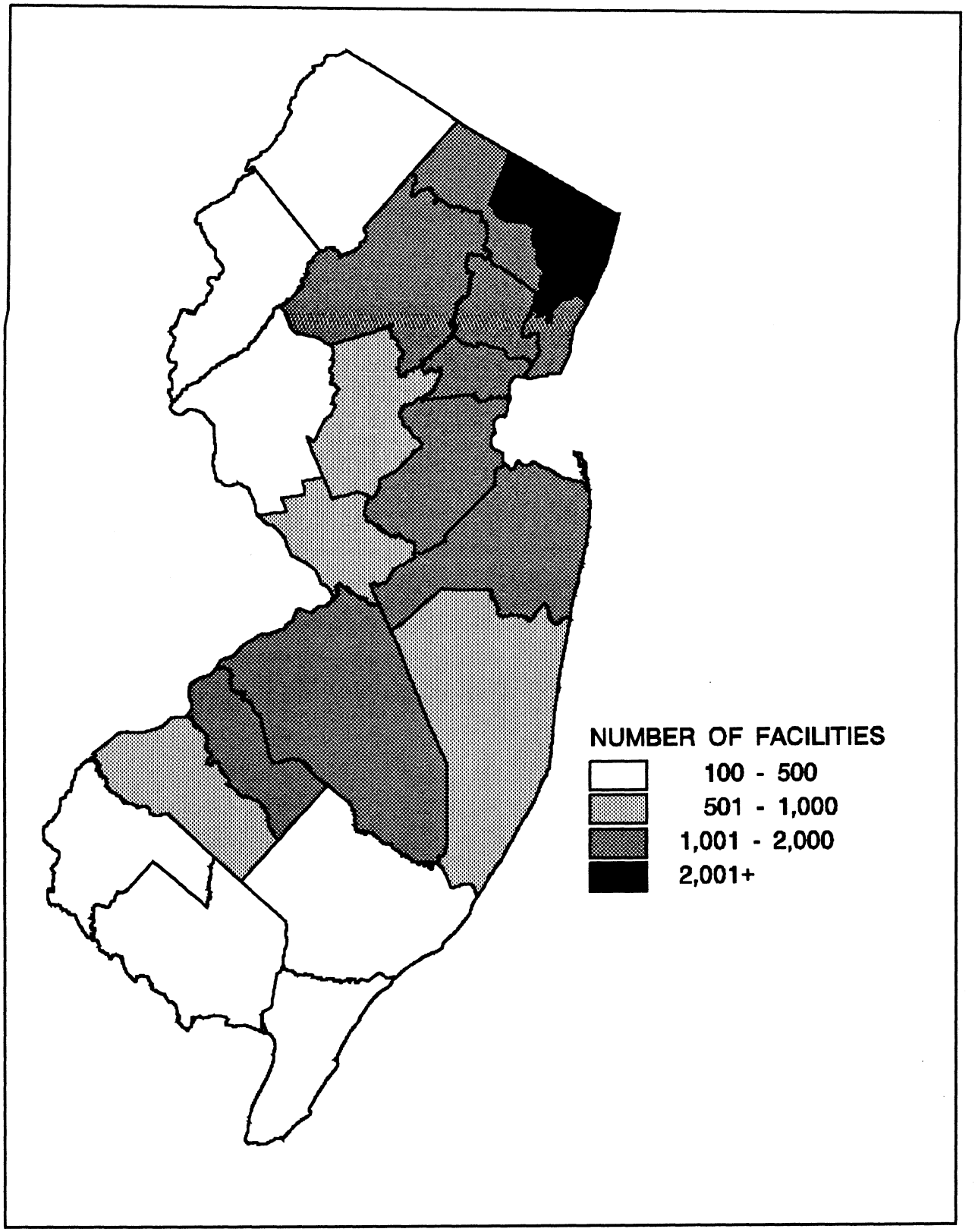
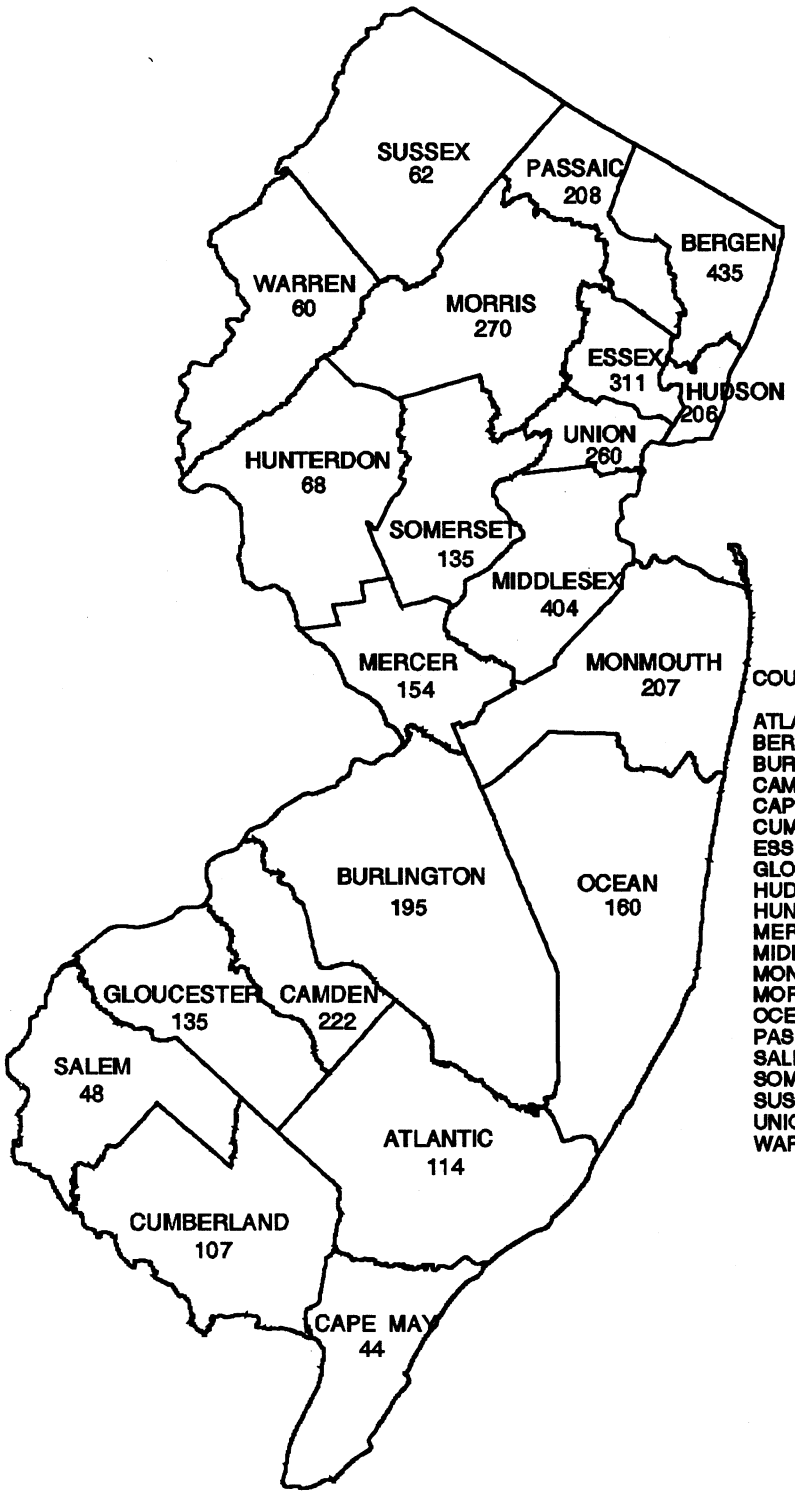


Figure 1. Number of Facilities that Reported Chemical Inventories on the CRTK Survey for 1994 by County



COUNTY	NUMBER OF FACILITIES	NUMBER OF SUBSTANCES
ATLANTIC	114	186
BERGEN	435	914
BURLINGTON	195	556
CAMDEN	222	595
CAPE MAY	44	82
CUMBERLAND	107	249
ESSEX	311	1,195
GLOUCESTER	135	779
HUDSON	206	1,029
HUNTERDON	68	184
MERCER	154	305
MIDDLESEX	404	2,042
MONMOUTH	207	469
MORRIS	270	564
OCEAN	160	292
PASSAIC	208	486
SALEM	48	272
SOMERSET	135	376
SUSSEX	62	101
UNION	260	1,267
WARREN	60	351
TOTAL =	3,805	12,294

Figure 2. Number of Facilities that Reported Greater than 50,000 Pounds of Maximum Daily Inventory for Individual Substances on the CRTK Survey for 1994

Table 1. The Top 35 Most Frequently Reported Substances[1] on the 1994 Community Right To Know Survey

Substance Number	Substance Name	Number of Records[2]
2651	Petroleum Oil	7,782
1594	Propane	4,977
1866	Toluene	4,628
0878	Ethylene Glycol	4,604
1076	Isopropyl Alcohol	4,350
0957	Gasoline	4,322
2014	Xylene (mixed isomers)	3,989
0015	Acetylene	3,636
0006	Acetone	3,477
1222	Methanol	3,445
2444	Diesel, Fuel Or Heating Oil	3,293
1237	1,1,1-Trichloroethane	2,846
2851	Used Petroleum Oil	2,441
1761	Sulfuric Acid	2,405
1706	Sodium Hydroxide	2,293
1810	Tetrachloroethylene (Perchloroethylene)	2,269
1258	Methyl Ethyl Ketone	2,222
1255	Dichloromethane	1,968
1448	Oxygen (compressed or liquified)	1,947
1012	Hydrochloric Acid	1,783
0528/2215	Copper and Copper Compounds	1,670
2021/3012	Zinc and Zinc Compounds	1,665
1096/2266	Lead and Lead Compounds	1,628
2628	Paint, etc., flammable liquid	1,601
1516	Phosphoric Acid	1,562
0844	Ethyl Alcohol	1,402
1040	Isobutane	1,136
2648	Petroleum Distillates, n.o.s.[3]	1,088
1091	Kerosene	1,023
0946	Formaldehyde	1,015
0343	Carbon Dioxide (compressed or liquified)	1,002
1268	Methyl Isobutyl Ketone	978
0275	2-Butoxy Ethanol	965
1330	n-Butyl Alcohol	937
0084	Ammonia	928
	Total Number of Records:	87,277

Footnotes:

1. The numbers reported can represent multiple substance records for a single facility (i.e., the substance was reported more than once).
2. The number of records reported, or the number of times the substance was reported, under the listed substance number.
3. "n.o.s." means not otherwise specified.

Table 2. The Top 35 Most Frequently Reported Substances[1] on the 1994 Community Right To Know Survey at an Inventory of 10,000 Pounds or More

Substance Number	Substance Name	Number of Records[2]
0957	Gasoline	2,818
2444	Diesel, Fuel Or Heating Oil	1,747
2651	Petroleum Oil	866
1706	Sodium Hydroxide	442
1761	Sulfuric Acid	328
0878	Ethylene Glycol	316
0528/2215	Copper and Copper Compounds	287
1091	Kerosene	286
1866	Toluene	284
2021/3012	Zinc and Zinc Compounds	270
2014	Xylene (Mixed Isomers)	262
1222	Methanol	236
1594	Propane	222
1375	Nitrogen (Compressed Or Liquified)	212
2461	Hazardous Waste	204
1076	Isopropyl Alcohol	191
0844	Ethyl Alcohol	176
0006	Acetone	169
1096/2266	Lead and Lead Compounds	157
0432/2245	Chromium and Chromium Compounds	150
1012	Hydrochloric Acid	137
1258	Methyl Ethyl Ketone	122
2648	Petroleum Distillates, n.o.s.[3]	122
3138	Glycol Ethers	118
0170	Asphalt (Petroleum Derived)	116
1516	Phosphoric Acid	107
0004	Acetic Acid	104
1660	Silica Quartz, (Dust)	104
1661	Silicate, Portland Cement	104
2851	Waste Oil	103
0054	Aluminum	102
1571	Potassium Hydroxide	102
1448	Oxygen (Compressed Or Liquified)	98
3622	PVC (Polyvinyl Chloride)	98
1255	Dichloromethane	96
	Total Number of Records:	11,256

Footnotes:

1. The numbers reported can represent multiple substance records for a single facility (i.e., the substance was reported more than once).
2. The number of records reported, or the number of times the substance was reported, under the listed substance number.
3. "n.o.s." means not otherwise specified.

THE RIGHT TO KNOW
PUBLIC ACCESS SYSTEM

THE RIGHT TO KNOW PUBLIC ACCESS SYSTEM

As part of the ongoing effort to make Right to Know data more accessible to the public, emergency responders and governmental agencies, the department, in cooperation with the New Jersey Department of Health (DOH) and the State Police Office of Emergency Management, developed the Right to Know Public Access System (RTKPAS). The RTKPAS provides direct access to public and private sector chemical inventory data via personal computer and modem. Anyone with a personal computer and modem may access this information directly from the DEP Right to Know computer system as long as one of the following communication software packages is used: PC Anywhere (preferred), ProComm, Carbon Copy, Terminal Applet, or Cross Talk for Windows.

The RTKPAS is a comprehensive database of information collected from private employers on the DEP Community Right To Know Survey and from public employers on the DOH Right To Know Survey. The RTKPAS also contains the DOH Hazardous Substance Fact Sheets, which provide information on the health effects of approximately 1,100 substances and how they can be handled and stored in a safe manner. Brief descriptions of pertinent state and federal laws are also contained in the RTKPAS.

The RTKPAS was accessed 1,821 times by 906 users during 1995. Figure 3 shows the users by category type and the usage by each type.

The department developed an RTKPAS module to enable facilities to submit Community Right to Know (CRTK) survey information electronically. The program allowed users to download an executable file with programs and screens required to input CRTK inventory data and to electronically submit that data to the department. Two facilities participated in this pilot project for reporting year 1994.

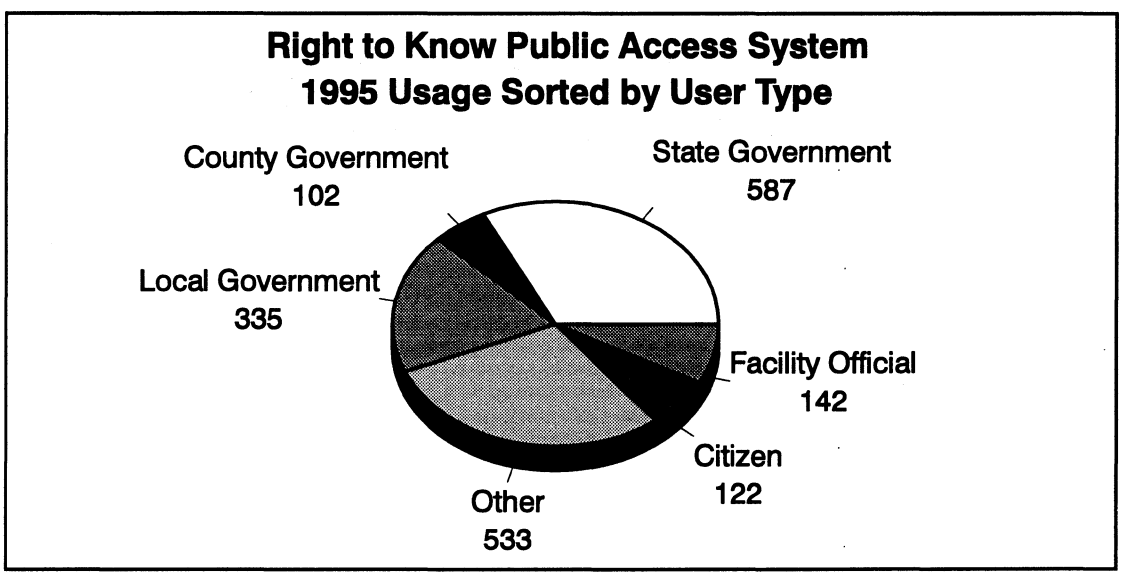
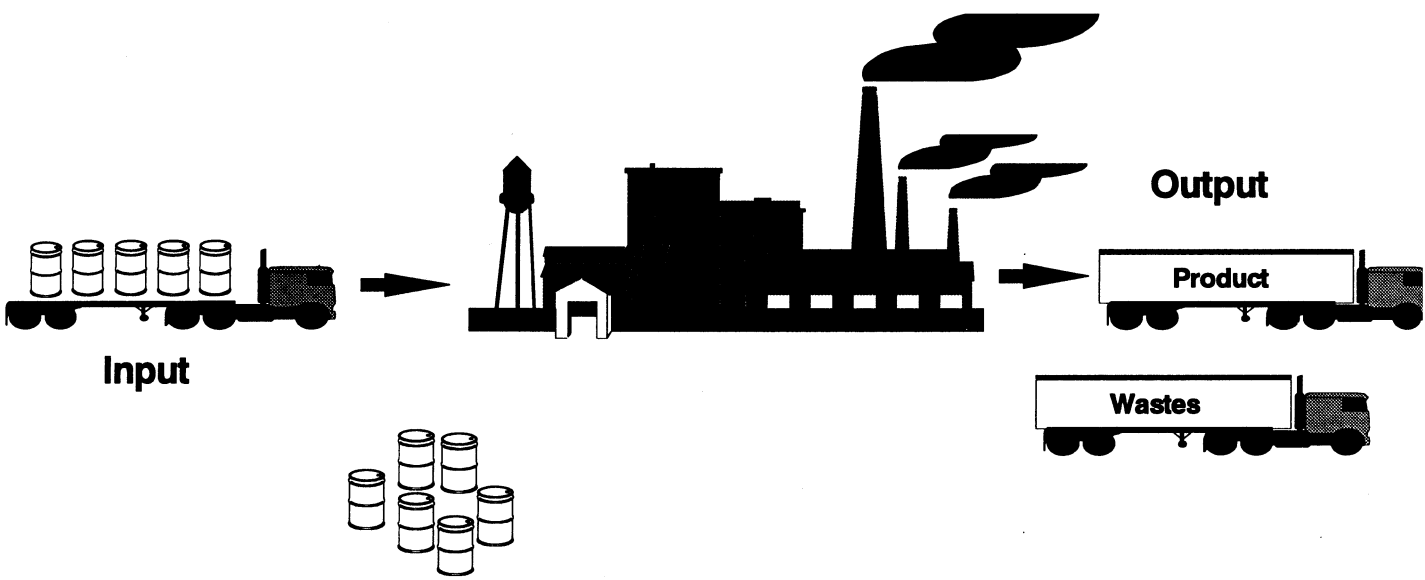


Figure 3. RTKPAS Frequency of Use by User Category in 1995.

NJ RELEASE & POLLUTION PREVENTION REPORT

ENVIRONMENTAL RELEASE & OFF-SITE TRANSFER AND MATERIALS ACCOUNTING DATA

FOR 1994



NEW JERSEY RELEASE AND POLLUTION PREVENTION REPORT

Environmental Release, Off-Site Transfer, and Materials Accounting Data Summary for 1994

Introduction

New Jersey facilities that are required to complete one or more federal Toxic Chemical Release Inventory (TRI) Reporting Forms (Form R) pursuant to EPCRA Section 313 are also required to submit additional information on the New Jersey Release and Pollution Prevention Report (DEQ-114) for every TRI toxic chemical reported on the Form R. The Form R and DEQ-114 must be filed by owners and operators of facilities that meet all three of the following criteria:

- the facility's business activity is included in the manufacturing Standard Industrial Classification codes 20 through 39; and
- the facility has 10 or more full-time employees; and
- the facility manufactured (defined to include imported) or processed any listed toxic chemical in quantities equal to or greater than 25,000 pounds or otherwise used any listed chemical in quantities equal to or greater than 10,000 pounds.

New Jersey facilities that are subject to submitting Form R are required to report on the Release and Pollution Prevention Report all EPCRA Section 313 toxic chemicals that are manufactured, processed or otherwise used in excess of 10,000 pounds. The 1994 DEQ-114 was a four-part reporting form. Section A provided information pertinent to the facility site and its overall operations. Section B contained the substance-specific throughput, release and transfer information for each toxic chemical reported on Form R including: beginning and ending inventories for the calendar year; the quantity of the toxic chemical produced on site, brought on site, consumed on site, and shipped off site as (or in) product; and on-site releases to the environment and off-site transfers. Also reported on the DEQ-114 are the quantities of a chemical that are recycled on and off site, that are used for energy recovery on and off site, and that are destroyed through on-site and off-site treatment. Sections C and D were new for 1994 and required that pollution prevention progress information be reported by facilities in SIC codes 26, 28, 30, 33 and 34. Facilities in these SIC codes were required to complete their initial pollution prevention plans in 1993 under the New Jersey Pollution Prevention Act.

For reporting year 1994, there were many changes to the EPCRA Section 313 list of reportable substances. Those changes include:

- eleven hydrochlorofluorocarbons (HCFCs) plus 17 unique substances and two chemical categories, classified as "U wastes" under the federal Resource Conservation and Recovery Act (RCRA), were added;
- the reporting qualification for ammonia was changed to "ammonia (includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10 percent of total aqueous ammonia is reportable under this listing)";
- ammonium sulfate (solution) was delisted and is now reported under the ammonia listing;
- the reporting qualification for sulfuric acid was changed from "solution" to "acid aerosol forms only"; and
- acetone, a chemical that appeared regularly in the top 10 for air emissions and off-site transfers in previous annual reports, as well as butyl benzyl phthalate and all copper phthalocyanine compounds that are substituted only with hydrogen and/or chlorine and/or bromine were delisted as it was determined by the USEPA that they did not meet the human health or environmental toxicity criteria established for a chemical to be listed on the EPCRA Section 313 list.

Therefore, with these additions to and deletions from the federal toxic chemical list, there were 341 unique chemicals and 22 chemical categories subject to reporting requirements of Section 313 of EPCRA and the New Jersey Release and Pollution Prevention Report for 1994.

As with the quantitative reporting of environmental releases, off-site transfers, and source reduction activities on Form R, materials accounting on the DEQ-114 is often based on best estimates rather than actual quantities. Facilities that submit the Release and Pollution Prevention Report are not required to monitor, measure or sample their waste streams to any extent beyond that required by existing federal or state laws, regulations, permits, etc., that govern the covered chemicals and the environmental media to which they are discharged. Also, different methods of accounting for or tracking materials through the various processing operations within a plant may be applied. Different methods of calculating releases and transfers that affect the final estimates may also be employed. Similar to Form R reporting, these estimated figures may be rounded to two significant integers, although the NJDEP does not encourage this practice in the materials accounting process.

General Findings

The information presented here is a summary of the 1994 data as received on the Release and Pollution Prevention Report (DEQ-114) by the NJDEP through May 31, 1996. As of that date, 659 New Jersey facilities reported on 193 of the 364 listed chemicals and compound categories, plus a generic group reported as "mixture," resulting in the reporting of 194 unique substance listings. Toxic chemical reporting under the heading of mixture occurs when a facility processes or uses a mixture that contains a TRI-listed chemical where the specific identity of the chemical is unknown. In these cases the manufacturer of the mixture has claimed confidentiality as to the specific identity of the regulated chemical, but must notify its customers that a TRI toxic chemical is present in certain quantities.

Of the reporting facilities, 657 were in the manufacturing sector and two were identified as unregulated non-manufacturing facilities. Currently, non-manufacturing sector facilities are not required to submit DEQ-114s, however, as in past years, a few always do. In total, 2,470 DEQ-114 Section B chemical-specific reports were submitted (one for each toxic chemical that was manufactured, processed or otherwise used in excess of the thresholds). For 1994, 223 facilities reported only one toxic chemical (DEQ-114 Section B) - this is three more than in 1993; 45 facilities reported 10 or more toxic chemicals compared to 64 facilities in 1993. The highest number of toxic chemicals reported by any facility was 63. Figure 4 shows a map of New Jersey indicating the number of facilities that reported in each county.

New Jersey's Right to Know program allows facility owners and operators to claim materials throughput data as trade secret, protecting sensitive and confidential business information, if certain criteria are met. Environmental release and off-site transfer data, however, may not be claimed as confidential. Six facilities claimed throughput confidentiality for 36 of their reported toxic chemicals. Therefore, the materials accounting data summaries exclude data from these six facilities and 36 reported chemicals. However, the on-site release and off-site transfer data from those chemical reports are included in the summaries immediately following.

Environmental Releases and Off-Site Transfers

The New Jersey data elements for on-site releases vary only slightly from those covered by the USEPA Form R. Reporting facilities are required to provide estimated quantities of the following on-site releases and off-site transfers on the DEQ-114 for each toxic chemical meeting the 10,000 pound annual threshold:

- air emissions (fugitive/nonpoint and stack/point);
- surface water discharges;
- ground water discharges (Form R does not include this category);
- on-site land releases (at the facility);
- discharges to publicly owned treatment works (POTW); and
- transfers to other off-site locations for further waste management (including recycling, energy recovery, treatment and disposal).

Total Statewide Releases: Nearly 170 million pounds of toxic chemical releases and off-site transfers were reported for 1994. More than 15 million pounds were reported released into the environment and 154.4 million pounds were transferred off site for recycling, energy recovery, treatment or disposal. Figure 5 depicts the 1994 total reported on-site releases and Figure 6 the total reported off-site transfers by reporting media. Table 3 summarizes the on-site releases and off-site transfers reported for each individual toxic chemical, listed alphabetically by chemical name. As stated previously, the reporting requirements for acetone, ammonia, ammonium sulfate and sulfuric acid were changed from the 1993 requirements. Since these changes occurred very late relative to the reporting deadline of July 1, 1995, most facilities had already reported the chemicals. Facilities were given an opportunity to revise their original submissions and many took advantage of this opportunity. Any report for acetone was simply excluded from the database and, therefore, the data summaries presented in this report. The aqueous ammonia portion of ammonium sulfate may have still been reportable under the modified ammonia listing, and ammonia and sulfuric acid reports may have needed to be revised as well. However, a review of the data for these chemicals indicate that some reports that should have been revised were not, at least by the time of this data summary, e.g see off-site transfers of sulfuric acid for recycling (Table 3). Therefore, reported quantities for ammonia and sulfuric acid were not considered in certain summaries presented in Tables 6 through 17. Figure 7 depicts the 1994 on-site releases and Figure 8 the off-site transfers by reporting media, excluding ammonia and sulfuric acid.

County Summary: Table 4 presents a detailed summary, by county, of the 1994 quantities. Middlesex County had the highest total quantity for both on-site releases and off-site transfers, approximately 61.7 million pounds combined (about 36% of the total). Atlantic County had the lowest quantity of on-site releases while Ocean County had the lowest quantity of off-site transfers, for counties with reporting facilities.

Manufacturing Industry Summary: Table 5 and Figure 9 present the reported 1994 data by Standard Industrial Classification (SIC) code. The Chemicals and Allied Products industry (SIC 28xx) reported the largest quantities for both on-site chemical releases and off-site transfers, approximately 89.8 million pounds combined. The Furniture & Fixtures industry (SIC 25xx) reported the least total amount of on-site releases to the environment and off-site transfers for manufacturing industry groups with reporting facilities. Note that Tables 3, 4, and 5 include data reported by two unregulated non-manufacturing sector facilities that submitted a total of five DEQ-114 Section B chemical-specific reports.

Top Ten Summaries: Tables 6 through 17 present a summary of the reported data for each category of on-site releases and off-site transfers except for groundwater discharges and for off-site transfers reported with no waste management codes or invalid codes. As evidenced in Table 3, groundwater discharges totalled 6 pounds. Off-site transfers that were reported without valid waste management codes or invalid codes are not ranked since this is not a valid reporting category. In addition to the individual categories, a combined total for air emissions, a combined total for on-site releases, and a combined total for off-site transfers are presented in summary (Tables 8, 11 and 17, respectively). Each table lists the top 10 toxic chemicals by total quantity reported, the top 10 quantities for any single toxic chemical record, and the top 10 facilities for total quantity reported.

Tables 6 through 17 also present a comparison of the 1994 top 10 rankings with the appropriate 1993 ranking for each category. The 1993 rankings were adjusted from those presented in the 1993 annual report to account for the chemical delistings and reclassifications that were discussed on page 13. Of particular significance to the rankings were the removal of acetone and ammonium sulfate from the list and the change in the reporting requirements for ammonia (anhydrous and aqueous) and sulfuric acid (from "solution" to "acid aerosol forms only"). These chemicals regularly occurred in the top 10 listings every reporting year. They are not included in the analyses nor the rankings presented in Tables 6 through 17. The footnotes in each of these tables present some further clarifying information with respect to the reporting and rankings of some listed chemicals and some facilities.

On-Site Releases

Chemical Emissions to Air: The DEQ-114 contains reported releases to the air for both stack (point) and fugitive (nonpoint) emissions. Tables 6 and 7 list the top 10 toxic chemicals by quantity emitted as stack and fugitive air releases, respectively, along with the percent each chemical contributed to the total amount reported. The 10 facilities reporting the largest stack and fugitive emissions for any single toxic chemical are presented, as well as the top 10 facilities for total stack air emissions and total fugitive air emissions. Table 8 lists the top 10 toxic chemicals for combined stack and fugitive air releases, the 10 facilities reporting the largest total air emissions of a single chemical, and the top 10 facilities for total air emissions. The delisting of acetone and the addition of new substances for 1994, particularly two HCFCs, affected the listings and rankings of chemicals in Tables 6 through 8.

Discharges to Surface Waters: The DEQ-114 covers point source releases as well as storm water runoff of toxic chemicals to surface waters. Table 9 lists the top 10 toxic chemicals by largest quantities of releases to surface waters, the top 10 facilities discharging the largest quantities of a single chemical, and the top 10 facilities for total surface water discharges. In previous years, large quantities of aqueous ammonia and ammonium sulfate were reported as discharged to surface waters. Since it is questionable whether the database contains valid quantities with respect to ammonia as reportable under the modified listing, it was excluded from these summaries.

Discharges to Ground Water: The DEQ-114 covers point source releases of toxic chemicals to ground water. For the 1994 reporting year, six Section B forms were submitted with the total of only six pounds reported as discharged to ground water. This data field is not found on the USEPA Form R; however, the facilities that report ground water discharges on the DEQ-114 most likely report this information under on-site land releases on Form R. (There is no top 10 table for this category.)

On-Site Releases to Land: Releases to on-site landfills, land treatment or application farming, surface impoundments, and "other" types of land disposal at the reporting facility's site are reported on the DEQ-114. Table 10 lists the top 10 toxic chemicals by largest quantities of on-site releases to land, the 10 facilities that released to on-site land disposal the largest quantities of a single chemical, and the top six facilities for total on-site land releases (since there were only six facilities reporting to this category). Chemicals reported for this type of waste management were roughly split into the "metals and compounds" categories and several organic compounds.

Total On-Site Releases: Table 11 lists the top 10 toxic chemicals by largest quantities of total on-site releases to all media (air, surface and ground water, and land), the top 10 facilities releasing the largest quantities of a single toxic chemical on site, and the top 10 facilities for total on-site releases. Since this group of toxic chemicals and facilities correlates closely to those reported on Table 8 (total air emissions), the revisions to the chemical list again played a significant role in the reported quantities and the resultant rankings.

Off-Site Transfers

The Release and Pollution Prevention Report (DEQ-114), Section B collects information on the amount of substances transferred to other off-site locations, i.e. publicly owned treatment works and other treatment and/or disposal facilities. Specifically, the amount of the reportable substance within the total waste transferred and the management method employed (e.g. recycling, energy recovery, etc.) are reported. This is the second annual report in which the department summarizes the top 10 substances transferred off-site, the top 10 transfers by quantity of a single chemical, and the top 10 for total transfers by management method. The annual report for survey year 1992 did present the POTW rankings; however, other off-site transfers were not presented.

Discharges to Publicly Owned Treatment Works: Table 12 lists the DEQ-114 data for toxic chemicals transferred in wastewater to publicly owned treatment works (POTW), also known as municipal sewage or wastewater treatment facilities. The top 10 toxic chemicals by largest quantities of POTW transfers, the top 10 facilities transferring the largest quantities of a single toxic chemical, and the top 10 facilities for total POTW discharges are listed. As in previous years, methanol continues to dominate this group of waste transfers, accounting for 63.8% of this category. The delisting of acetone and ammonium sulfate, and the change in reporting requirements for aqueous ammonia have resulted in significant changes to these lists. Again, due to the questionable validity of the reported quantities of ammonia presented in Table 3, ammonia was excluded from the summaries.

Off-Site Transfers for Recycling: Table 13 lists the top 10 chemicals by largest quantities transferred off-site for recycling, the top 10 facilities transferring the largest quantities of a single chemical, and the top 10 facilities for total off-site transfers for recycling. In 1993, this category was dominated by sulfuric acid, which was sent off site for acid regeneration. Since "acid aerosol forms only" were to be reported in 1994, sulfuric acid was excluded from the summaries presented here even though Table 3 demonstrates that the database contains 38.5 million pounds reported under this heading.

Off-Site Transfers for Energy Recovery: Table 14 lists the top 10 chemicals by largest quantities transferred off-site for energy recovery, the top 10 facilities transferring the largest quantities of a single chemical, and the top 10 facilities for total off-site transfers for energy recovery. A toxic chemical must have a heating value high enough to sustain combustion and must be combusted in an energy recovery unit in order for the chemical to be reported in this category. Acetone's delisting had an impact on the lists in Table 14. Note that many of the metals and metal compounds are reported incorrectly in this category (e.g. see Table 3, nickel compounds, zinc or zinc compounds).

Off-Site Transfers for Treatment: Table 15 lists the top 10 chemicals by largest quantities transferred for off-site treatment, the top 10 facilities transferring the largest quantities of a single chemical, and the top 10 facilities for total off-site transfers for treatment. This category focuses on the destruction of chemicals by treatment methods. Again, note that many of the metals and metal compounds are reported incorrectly in this category (observe the presence of lead and compounds on the lists in Table 15).

Off-Site Transfers for Disposal: Table 16 lists the top 10 chemicals by largest quantities transferred for off-site disposal, the top 10 facilities transferring the largest quantities of a single chemical, and the top 10 facilities for total off-site transfers for disposal.

Total Off-Site Transfers: Table 17 presents the top 10 chemicals by largest quantities of total off-site transfers by all management methods reported, the top 10 facilities transferring the largest quantities of a single chemical, and the top 10 facilities for total off-site transfers. Total

off-site transfers includes discharges to publicly owned treatment works and all other transfers to off-site locations for the purposes of recycling, energy recovery, treatment and disposal.

Uses and Health Effects of Reported Chemicals

The toxic effects on human health and the environment of the reported chemicals vary widely. Appendix C presents a summary of the more common uses and the potential hazards presented by the chemicals found in the "Top 10" lists in Tables 6 through 17. Readers are encouraged to consult chemical or toxicology references when there is interest in knowing more about any of the substances presented in this report.

Observed Differences between DEQ-114 and Form R Data

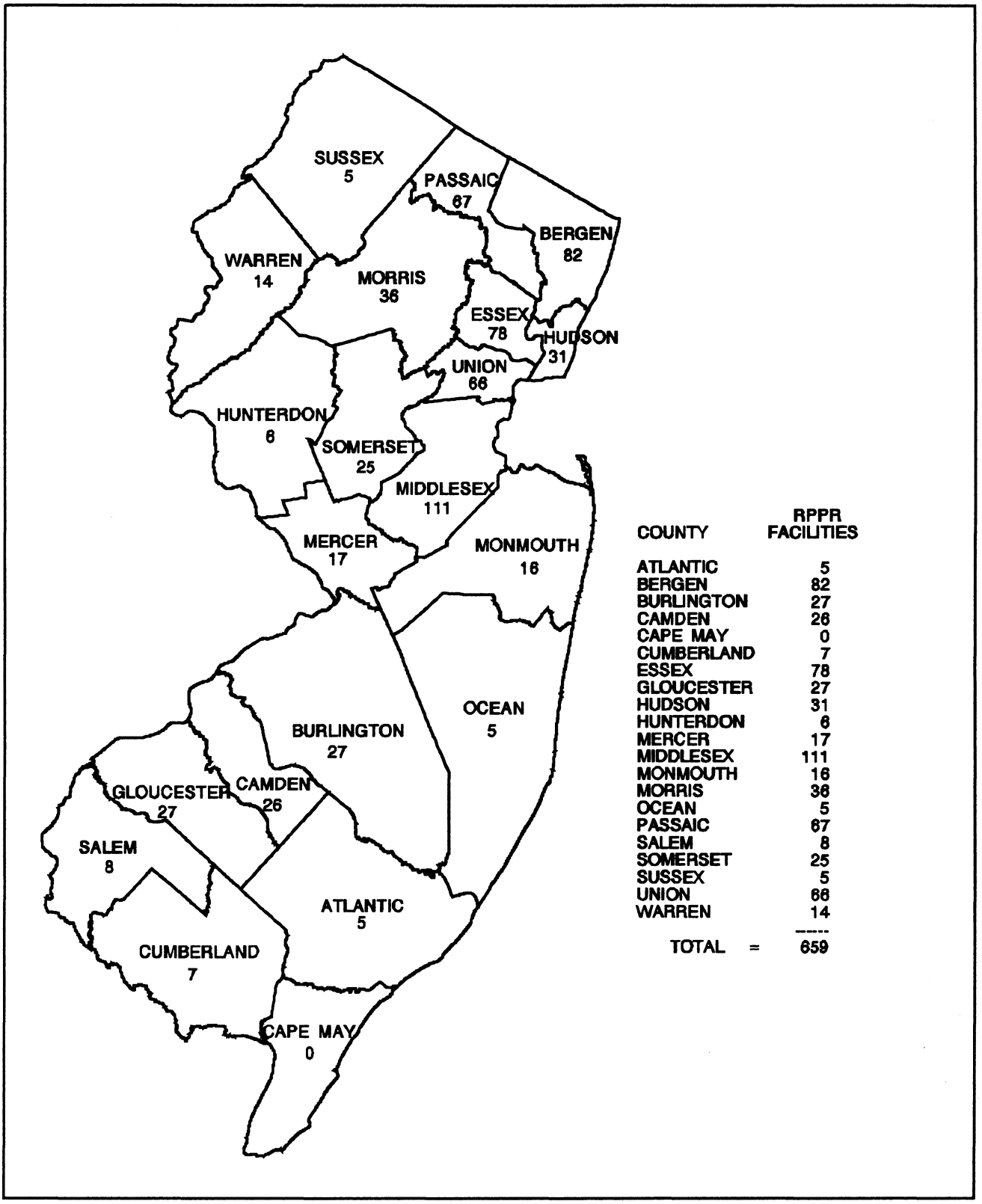
As mentioned previously, there are inherent differences between the federal and state Right to Know programs for the reporting of environmental releases and off-site transfers of toxic chemicals. Table 25 (on page 85 of this report) presents a summary and a comparison of the data reported by New Jersey facilities for 1994. Two factors account for the largest discrepancies observed in Table 25; they are:

1) number of forms: New Jersey's reporting threshold of 10,000 pounds for manufacture, process or use of a chemical results in more forms submitted; and,

2) changes to the list of reportable substances that occurred close to the reporting due date, specifically the modification for aqueous forms of ammonia and related discharges to POTWs and surface waters, and the reporting of sulfuric acid - several facilities reported large quantities of sulfuric acid on the DEQ-114 and not on the Form R. The department is looking into this matter. It is most likely that these quantities should be revised downward, if not removed altogether, since acid aerosol forms only are to be reported.

Some other observed factors that account, to a lesser extent, for differences in the release and transfer quantities (noted in Table 25) include:

- toxic chemicals reported on Form R but not on DEQ-114;
- releases or transfers reported on Form R but not on DEQ-114, or vice versa;
- quantities of transfers reported as off-site recycling or energy recovery on Form R but are reported as shipped off site as (or in) product on the DEQ-114; this latter approach, while accounting for the chemical in a materials balance sense, incorrectly removes the quantity from the release/transfer category; and
- Form R allows estimated release quantities less than 1,000 pounds to be reported as a range, i.e., "1 - 10" pounds, "11 - 499" pounds, and "500 - 999" pounds; for data management purposes the midpoint of each range, "5," "250," and "750," respectively, are entered when a range is reported on Form R; quantitative estimates, not ranges, are required on the DEQ-114; while this factor is probably the least significant, it does have some effect when considering impacts on the database as a whole.



COUNTY	RPPR FACILITIES
ATLANTIC	5
BERGEN	82
BURLINGTON	27
CAMDEN	26
CAPE MAY	0
CUMBERLAND	7
ESSEX	78
GLOUCESTER	27
HUDSON	31
HUNTERDON	6
MERCER	17
MIDDLESEX	111
MONMOUTH	16
MORRIS	36
OCEAN	5
PASSAIC	67
SALEM	8
SOMERSET	25
SUSSEX	5
UNION	66
WARREN	14
TOTAL =	659

Figure 4. Number of Facilities that Submitted the New Jersey Release and Pollution Prevention Report for 1994 by County

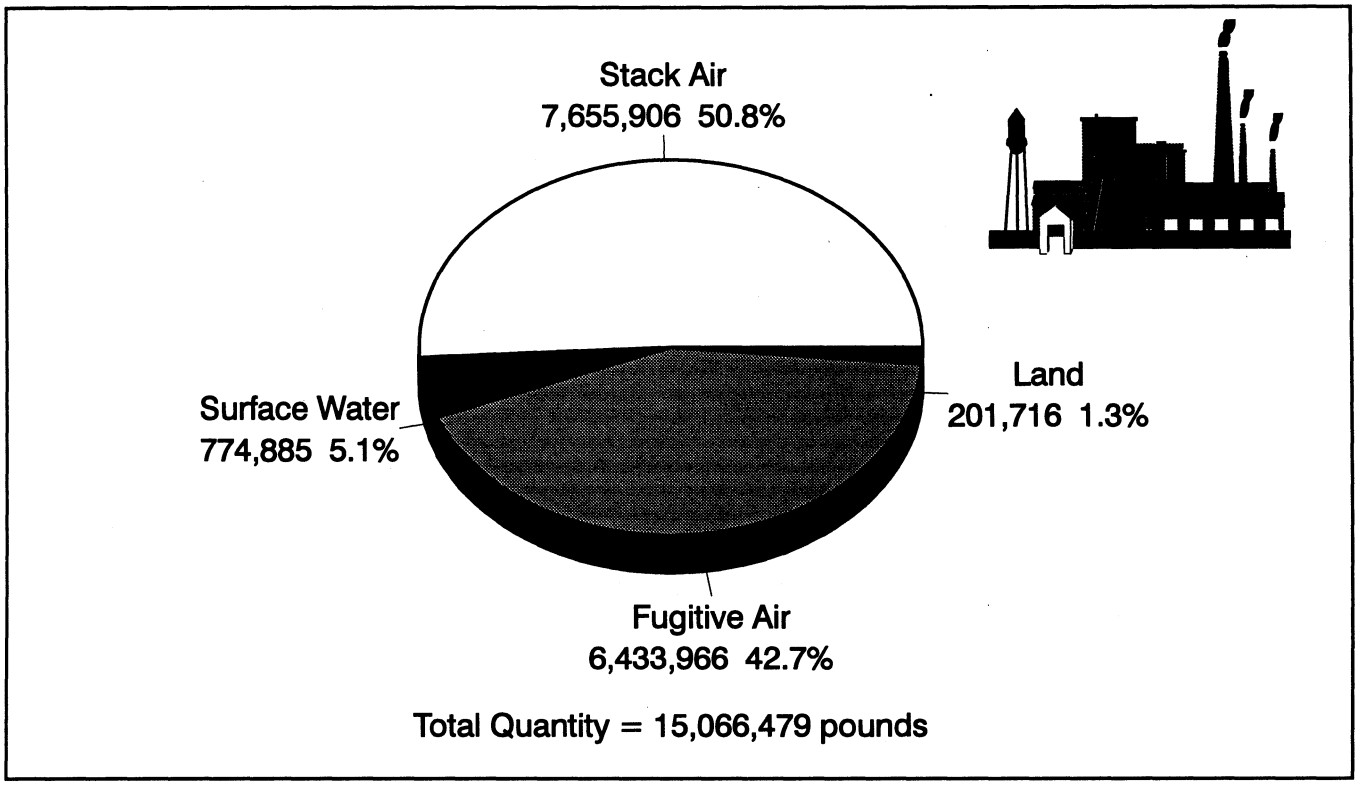


Figure 5. 1994 RPPR Total Reported On-Site Releases (by reporting media)

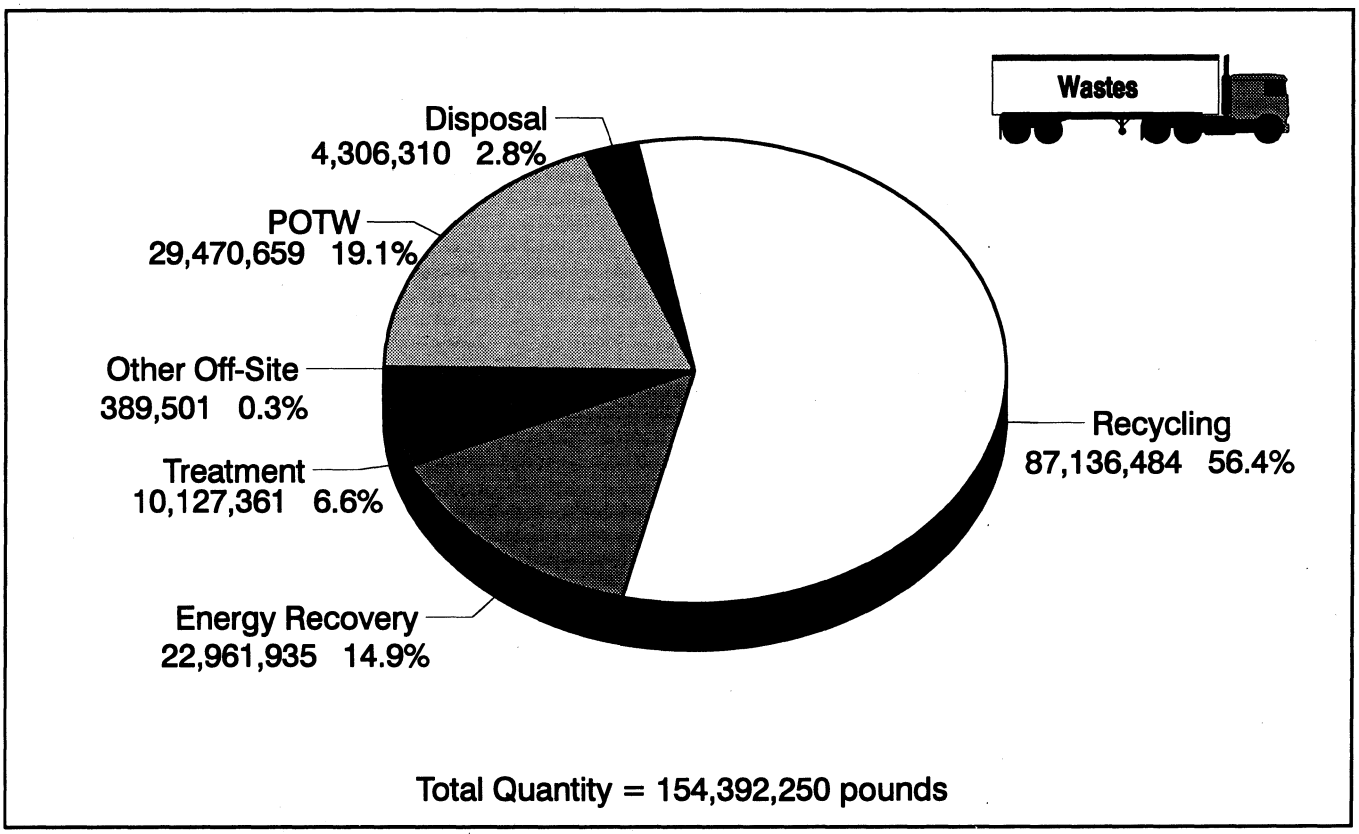


Figure 6. 1994 RPPR Total Reported Off-Site Transfers (by reporting media)

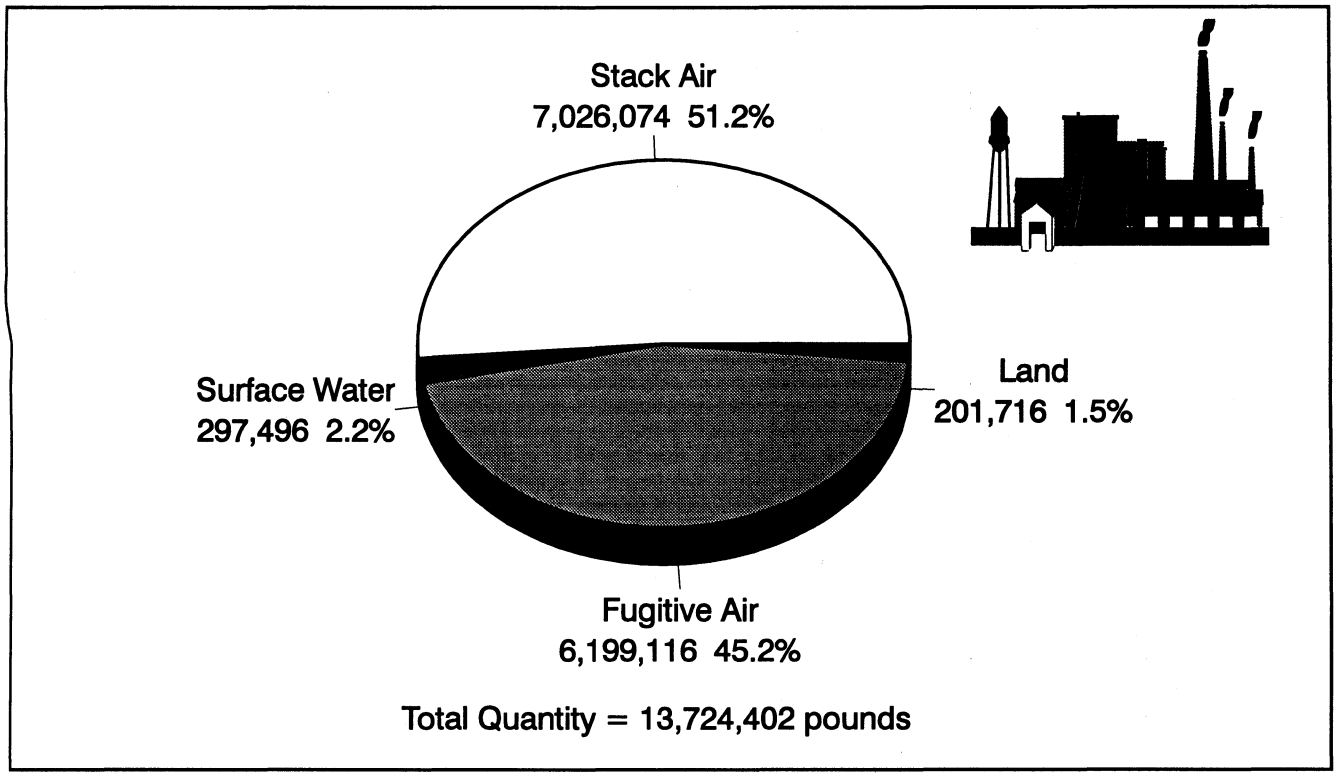


Figure 7. 1994 RPPR On-Site Releases excluding ammonia & sulfuric acid (by reporting media)

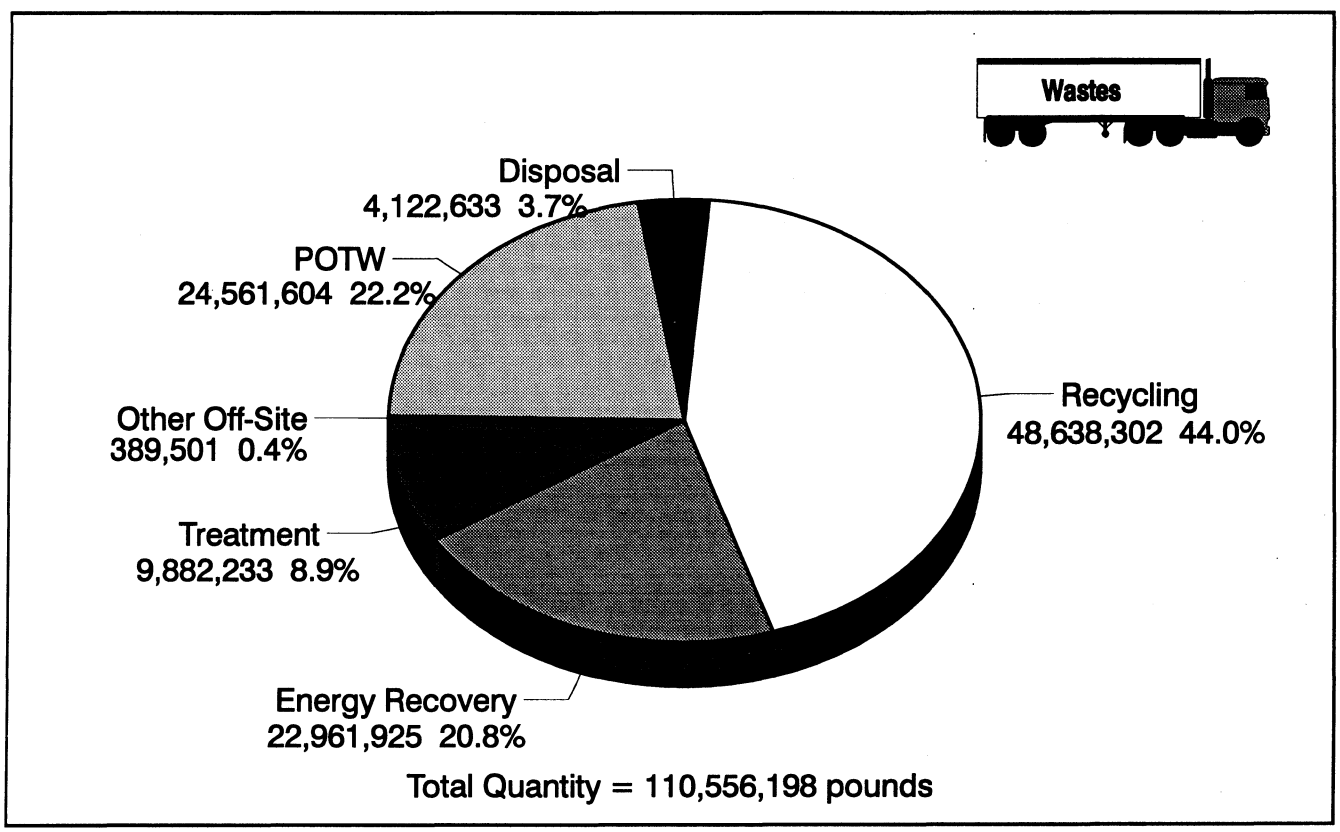


Figure 8. 1994 RPPR Off-Site Transfers excluding ammonia & sulfuric acid (by reporting media)

Table 3. 1994 RPPR On-Site Releases and Off-Site Transfers Reported by New Jersey Facilities[1]
(ordered alphabetically by chemical name; releases and transfers reported in pounds per year)

CAS #	Chemical Name	Stack Air Emissions	Fugitive Air Emissions	Discharges to Surface Water	Discharges to Ground Water	On-Site Land Disposal	Total On-Site Releases[2]
75-07-0	Acetaldehyde	4,616	5	0	0	0	4,621
75-05-8	Acetonitrile	4,153	4,045	0	0	0	8,198
98-86-2	Acetophenone	228	7	0	0	0	235
79-06-1	Acrylamide	11	128	300	0	0	439
79-10-7	Acrylic acid	259	5,022	0	0	0	5,281
107-13-1	Acrylonitrile	1,388	649	1	0	0	2,038
107-18-6	Allyl alcohol	52	6	0	0	0	58
107-05-1	Allyl chloride	948	549	0	0	0	1,497
7429-90-5	Aluminum (fume or dust)	691	6,150	0	0	0	6,841
1344-28-1	Aluminum oxide (fibrous forms only)	0	100	0	0	0	100
60-09-3	4-Aminoazobenzene	0	0	0	0	0	0
7664-41-7	Ammonia[3]	591,428	209,202	477,389	0	0	1,278,019
6484-52-2	Ammonium nitrate (solution)	0	0	184,775	0	0	184,775
62-53-3	Aniline	1,979	371	669	0	0	3,019
90-04-0	o-Anisidine	1	52	0	0	0	53
120-12-7	Anthracene	4	69	5	0	5	83
7440-36-0	Antimony	266	504	76	0	0	846
	Antimony compounds	349	1,157	3	1	0	1,510
7440-38-2	Arsenic	5	0	0	0	0	5
	Arsenic compounds	1	1	0	0	0	2
1332-21-4	Asbestos (friable)	1	300	0	0	0	301
7440-39-3	Barium	0	12,375	5	0	0	12,380
	Barium compounds	2,925	6,668	423	1	0	10,017
98-87-3	Benzal chloride	12	4	0	0	0	16
71-43-2	Benzene	39,179	71,210	1,317	0	32	111,738
98-07-7	Benzoic trichloride	0	0	0	0	0	0
98-88-4	Benzoyl chloride	29	0	0	0	0	29
94-36-0	Benzoyl peroxide	0	91	0	0	0	91
100-44-7	Benzyl chloride	2,036	2,241	49	0	0	4,326
92-52-4	Biphenyl	366	103	0	0	0	469
103-23-1	Bis(2-ethylhexyl) adipate	75	23,334	0	0	0	23,409
542-88-1	Bis(chloromethyl) ether	56	1	0	0	0	57
74-83-9	Bromomethane	1,350	13,700	0	0	0	15,050
106-99-0	1,3-Butadiene	0	737	0	0	0	737
141-32-2	Butyl acrylate	1,472	8,149	0	0	0	9,621
71-36-3	n-Butyl alcohol	482,168	75,425	1,083	0	0	558,676
78-92-2	sec-Butyl alcohol	7,540	4,650	3,856	0	0	16,046
75-65-0	tert-Butyl alcohol	1,762	17,774	0	0	0	19,536
123-72-8	Butyraldehyde	2	255	0	0	0	257
569-64-2	C I Basic Green 4	0	0	0	0	0	0
989-38-8	C I Basic Red 1	4	4	0	0	0	8
81-88-9	C I Food Red 15	0	0	0	0	0	0
3118-97-6	C I Solvent Orange 7	0	1	0	0	0	1
97-56-3	C I Solvent Yellow 3	0	0	0	0	0	0
842-07-9	C I Solvent Yellow 14	0	0	0	0	0	0
7440-43-9	Cadmium	200	40	0	0	0	240
	Cadmium compounds	716	296	1	0	0	1,013
133-06-2	Captan	0	3	0	0	0	3
75-15-0	Carbon disulfide	22,344	2,499	21	0	70	24,934
56-23-5	Carbon tetrachloride	23,040	0	0	0	0	23,040

Footnotes:
see pages 28 and 29

Discharges to POTWs	Off-Site Transfers for Recycling	Off-Site Transfers for Energy Recovery	Off-Site Transfers for Treatment	Off-Site Transfers for Disposal	Other Off-Site Transfers[5]	Total Off-Site Transfers	Number of Forms	Chemical Name
0	0	0	315	0	0	315	3	Acetaldehyde
2,747	0	145,081	805	803	0	149,436	6	Acetonitrile
2	0	54,962	0	0	0	54,964	2	Acetophenone
47	0	0	293	3	0	343	4	Acrylamide
468	10,009	0	267	3	0	10,747	16	Acrylic acid
87	0	0	2,255	16	0	2,358	7	Acrylonitrile
526	0	22,511	0	0	0	23,037	2	Allyl alcohol
0	0	10,131	0	0	0	10,131	1	Allyl chloride
0	66,012	0	0	12	0	66,024	6	Aluminum (fume or dust)
0	0	0	0	0	0	0	1	Aluminum oxide (fibrous forms only)
0	0	0	0	0	0	0	1	4-Aminoazobenzene
4,883,258	1,524	10	88,851	3,688	0	4,977,331	87	Ammonia
244,537	0	0	0	0	0	244,537	7	Ammonium nitrate (solution)
5,596	0	139	2,598	2	0	8,335	10	Aniline
2,196	0	0	0	0	0	2,196	3	o-Anisidine
0	7	0	15	30	0	52	1	Anthracene
91	69,020	0	64	0	0	69,175	6	Antimony
1,104	10,763	155	5,382	73,419	0	90,823	27	Antimony compounds
0	0	0	0	500	0	500	1	Arsenic
1	5	3	6,101	341	508	6,959	6	Arsenic compounds
0	0	0	62	164	0	226	3	Asbestos (friable)
0	9,708	0	0	27,084	0	36,792	2	Barium
14,174	220,605	315	39,168	4,535	75	278,872	33	Barium compounds
0	0	53,608	0	0	0	53,608	1	Benzal chloride
8,527	203	245,546	8,244	2,627	0	265,147	11	Benzene
0	0	0	0	0	0	0	1	Benzoic trichloride
0	0	0	0	0	0	0	2	Benzoyl chloride
0	0	0	0	45	0	45	2	Benzoyl peroxide
182	0	409,292	124	0	0	409,598	6	Benzyl chloride
8,706	0	0	207	0	0	8,913	3	Biphenyl
2,717	0	5,806	0	552	0	9,075	10	Bis(2-ethylhexyl) adipate
0	0	0	0	1	0	1	1	Bis(chloromethyl) ether
0	0	0	1,020	0	0	1,020	2	Bromomethane
0	0	0	17	0	0	17	4	1,3-Butadiene
29	346	105	4,359	3	549	5,391	13	Butyl acrylate
195,834	162,243	455,232	46,650	1,610	0	861,569	53	n-Butyl alcohol
333	0	425,866	13,848	0	0	440,047	5	sec-Butyl alcohol
73,900	0	130,121	3,348	2	0	207,371	4	tert-Butyl alcohol
0	0	0	0	0	0	0	1	Butyraldehyde
68	0	0	0	0	0	68	1	C I Basic Green 4
24	0	0	0	0	0	24	1	C I Basic Red 1
0	0	0	0	0	0	0	1	C I Food Red 15
1,331	0	0	0	0	0	1,331	2	C I Solvent Orange 7
0	0	0	0	0	0	0	1	C I Solvent Yellow 3
0	0	0	0	0	0	0	1	C I Solvent Yellow 14
8	0	0	0	0	0	8	1	Cadmium
10	1,362	5	600	376	0	2,353	10	Cadmium compounds
0	0	0	0	0	0	0	1	Captan
149	176	4,522	14,635	0	0	19,482	2	Carbon disulfide
0	0	0	0	0	0	0	1	Carbon tetrachloride

Footnotes:
see pages 28 and 29

Table 3. 1994 RPPR On-Site Releases and Off-Site Transfers Reported by New Jersey Facilities,[1] continued (ordered alphabetically by chemical name; releases and transfers reported in pounds per year)

CAS #	Chemical Name	Stack Air Emissions	Fugitive Air Emissions	Discharges to Surface Water	Discharges to Ground Water	On-Site Land Disposal	Total On-Site Releases[2]
120-80-9	Catechol	0	0	0	0	0	0
	Chlorinated phenols	1	31	0	0	0	32
7782-50-5	Chlorine	22,782	5,006	7,270	0	0	35,058
79-11-8	Chloroacetic acid	28	11	0	0	0	39
75-68-3	1-Chloro-1,1-difluoroethane (HCFC-142b)	8,425	356	0	0	0	8,781
75-45-6	Chlorodifluoromethane (HCFC-22)	2,259	262,916	62	0	0	265,237
75-00-3	Chloroethane	15,853	33,822	5	0	0	49,680
67-66-3	Chloroform	2,309	39,553	459	0	0	42,321
74-87-3	Chloromethane	57,923	833	17,157	0	0	75,913
107-30-2	Chloromethyl methyl ether	2,728	2	10	0	0	2,740
2837-89-0	2-Chloro-1,1,2,2-tetra-fluoroethane (HCFC-124)	4,401	212,266	1,306	0	0	217,973
7440-47-3	Chromium	3,376	3,899	0	0	0	7,275
	Chromium compounds	9,320	5,385	3,879	1	17,914	36,499
7440-48-4	Cobalt	695	31	0	0	0	726
	Cobalt compounds	458	855	53	0	153	1,519
7440-50-8	Copper	11,666	1,483	43	0	1,683	14,875
	Copper compounds	1,273	2,118	72	0	0	3,463
8001-58-9	Creosote	3,300	4,600	0	0	0	7,900
95-48-7	o-Cresol	0	0	0	0	0	0
106-44-5	p-Cresol	458	400	0	0	0	858
1319-77-3	Cresol (mixed isomers)	551	1,252	0	0	0	1,803
98-82-8	Cumene	111,561	43,283	11	0	10	154,865
80-15-9	Cumene hydroperoxide	110	1	0	0	0	111
	Cyanide compounds	1,300	1	0	0	0	1,301
110-82-7	Cyclohexane	15,832	18,776	444	0	0	35,052
1163-19-5	Decabromodiphenyl oxide	111	121	0	0	0	232
101-80-4	4,4'-Diaminodiphenyl ether	69	7	1,436	0	12	1,524
95-80-7	2,4-Diaminotoluene	0	0	0	0	0	0
106-93-4	1,2-Dibromoethane	1,717	52	0	0	72	1,841
84-74-2	Dibutyl phthalate	270	259	4	0	0	533
95-50-1	1,2-Dichlorobenzene	17,454	451	630	0	24,287	42,822
106-46-7	1,4-Dichlorobenzene	0	768	0	0	0	768
91-94-1	3,3'-Dichlorobenzidine	0	0	0	0	0	0
75-71-8	Dichlorodifluoromethane (CFC-12)	63,712	68,583	0	0	0	132,295
107-06-2	1,2-Dichloroethane	149	0	0	0	0	149
1717-00-6	1,1-Dichloro-1-fluoroethane (HCFC-141b)	68,404	66,468	0	0	0	134,872
75-09-2	Dichloromethane	660,327	153,788	985	0	2	815,102
120-83-2	2,4-Dichlorophenol	80	25	0	0	0	105
78-87-5	1,2-Dichloropropane	146,296	8,407	308	0	0	155,011
76-14-2	Dichlorotetrafluoroethane (CFC-114)	1,088	165,633	5,940	0	0	172,661
306-83-2	2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123)	2	0	7	0	0	9
111-42-2	Diethanolamine	894	780	1	1	0	1,676
117-81-7	Di(2-ethylhexyl) phthalate	4,779	39,718	578	1	0	45,076
84-66-2	Diethyl phthalate	3,078	7,134	13	0	0	10,225
64-67-5	Diethyl sulfate	259	58	0	0	0	317
119-90-4	3,3'-Dimethoxybenzidine	0	3	0	0	0	3
131-11-3	Dimethyl phthalate	149	17	3	0	0	169
77-78-1	Dimethyl sulfate	119	8	0	0	0	127
124-40-3	Dimethylamine	8	1	55	0	0	64
99-65-0	m-Dinitrobenzene	469	21	5,087	0	95,086	100,663

Footnotes:
see pages 28 and 29

Discharges to POTWs	Off-Site Transfers for Recycling	Off-Site Transfers for Energy Recovery	Off-Site Transfers for Treatment	Off-Site Transfers for Disposal	Other Off-Site Transfers[5]	Total Off-Site Transfers	Number of Forms	Chemical Name
41,047	0	0	0	0	0	41,047	2	Catechol
244	0	0	0	0	0	244	1	Chlorinated phenols
11,990	0	2,025	0	0	0	14,015	18	Chlorine
5	0	0	0	0	0	5	2	Chloroacetic acid
0	0	0	0	0	0	0	1	1-Chloro-1,1-difluoroethane (HCFC-142b)
0	0	0	12,641	0	0	12,641	7	Chlorodifluoromethane (HCFC-22)
25	392	3,048	2,285	0	0	5,750	3	Chloroethane
36,256	22,182	5,590	22,053	0	0	86,081	6	Chloroform
0	0	0	0	0	0	0	3	Chloromethane
0	0	0	0	70	0	70	1	Chloromethyl methyl ether
0	0	0	21,637	0	0	21,637	1	2-Chloro-1,1,2,2-tetra-fluoroethane (HCFC-124)
326	576,273	0	6,205	15,506	0	598,310	30	Chromium
25,948	73,366	168	109,816	8,204	0	217,502	35	Chromium compounds
277	381,945	0	9,298	8,198	0	399,718	10	Cobalt
2,477	25,136	798	660	587	0	29,658	14	Cobalt compounds
558	9,405,385	5,511	14,982	2,422	2,782	9,431,640	61	Copper
23,884	3,299,565	54	47,713	124,830	0	3,496,046	33	Copper compounds
0	0	0	6,214	20,735	0	26,949	1	Creosote
0	0	14	0	0	0	14	1	o-Cresol
150	0	400	0	0	0	550	2	p-Cresol
163	0	0	0	0	0	163	4	Cresol (mixed isomers)
139	2	15,834	746	1,630	0	18,351	17	Cumene
0	0	0	20	0	0	20	1	Cumene hydroperoxide
57	6	0	10	80	0	153	7	Cyanide compounds
20	0	1,101	90,882	547	0	92,550	12	Cyclohexane
0	0	30	323	45,336	0	45,689	8	Decabromodiphenyl oxide
0	0	0	0	0	0	0	2	4,4'-Diaminodiphenyl ether
0	0	0	0	0	0	0	1	2,4-Diaminotoluene
0	0	0	10,529	0	0	10,529	2	1,2-Dibromoethane
1,215	5	101,044	31,850	734	0	134,848	11	Dibutyl phthalate
8,156	1,898,570	113,720	1,284,422	893	0	3,305,761	3	1,2-Dichlorobenzene
0	0	0	0	0	0	0	3	1,4-Dichlorobenzene
0	0	0	0	0	0	0	1	3,3'-Dichlorobenzidine
0	0	0	84,911	0	0	84,911	7	Dichlorodifluoromethane (CFC-12)
6,775	56,814	0	0	0	0	63,589	1	1,2-Dichloroethane
0	5,424	0	560	1,323	0	7,307	5	1,1-Dichloro-1-fluoroethane (HCFC-141b)
138,422	4,093,169	242,712	78,786	90	0	4,553,179	40	Dichloromethane
0	0	0	0	0	0	0	1	2,4-Dichlorophenol
0	0	0	0	696	0	696	1	1,2-Dichloropropane
0	0	0	4,016	0	0	4,016	1	Dichlorotetrafluoroethane (CFC-114)
0	0	0	3,974	0	0	3,974	1	2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123)
132,976	0	10,372	638	320	0	144,306	18	Diethanolamine
1	1,658	7,594	50,289	59,469	0	119,011	17	Di(2-ethylhexyl) phthalate
23,924	0	3,390	1,976	1,345	0	30,635	19	Diethyl phthalate
17	0	0	0	0	0	17	5	Diethyl sulfate
33	0	0	0	0	0	33	1	3,3'-Dimethoxybenzidine
596	0	0	0	198	0	794	1	Dimethyl phthalate
0	0	0	0	0	0	0	6	Dimethyl sulfate
0	0	0	0	55	0	55	1	Dimethylamine
0	0	0	0	0	0	0	1	m-Dinitrobenzene

Footnotes:
see pages 28 and 29

Table 3. 1994 RPPR On-Site Releases and Off-Site Transfers Reported by New Jersey Facilities,[1] continued (ordered alphabetically by chemical name; releases and transfers reported in pounds per year)

CAS #	Chemical Name	Stack Air Emissions	Fugitive Air Emissions	Discharges to Surface Water	Discharges to Ground Water	On-Site Land Disposal	Total On-Site Releases[2]
528-29-0	o-Dinitrobenzene	60	3	651	0	11	725
100-25-4	p-Dinitrobenzene	16	1	177	0	3	197
106-89-8	Epichlorohydrin	812	707	95	0	0	1,614
110-80-5	2-Ethoxyethanol	215	231	0	0	0	446
140-88-5	Ethyl acrylate	2,006	3,782	0	0	0	5,788
100-41-4	Ethylbenzene	92,659	45,758	1,459	0	0	139,876
74-85-1	Ethylene	19,640	70,713	0	0	0	90,353
107-21-1	Ethylene glycol	10,432	15,680	904	0	0	27,016
75-21-8	Ethylene oxide	5,009	20,820	0	0	0	25,829
96-45-7	Ethylene thiourea	0	0	0	0	0	0
50-00-0	Formaldehyde	39,622	14,666	4,023	0	0	58,311
64-18-6	Formic acid	391	1,509	0	0	0	1,900
76-13-1	Freon 113	117,740	161,267	587	0	0	279,594
	Glycol ethers	575,325	117,764	5	0	0	693,094
118-74-1	Hexachlorobenzene	60	0	0	0	0	60
67-72-1	Hexachloroethane	0	0	0	0	0	0
70-30-4	Hexachlorophene	0	0	0	0	0	0
302-01-2	Hydrazine	1,600	640	0	0	0	2,240
10034-93-2	Hydrazine sulfate	2	0	0	0	0	2
7647-01-0	Hydrochloric acid	156,003	45,274	0	0	0	201,277
7664-39-3	Hydrogen fluoride	4,070	2,993	0	0	0	7,063
123-31-9	Hydroquinone	9	8	0	0	0	17
78-84-2	Isobutyraldehyde	2,404	604	0	0	0	3,008
67-63-0	Isopropyl alcohol (manufacturing, strong acid process only)	880	384	0	0	0	1,264
80-05-7	4,4'-Isopropylidenediphenol	17	166	0	0	0	183
7439-92-1	Lead	6,078	1,049	5	0	36,900	44,032
	Lead compounds	11,494	1,546	894	1	20,942	34,877
108-31-6	Maleic anhydride	3,841	1,020	1	0	0	4,862
7439-96-5	Manganese	2,371	1,619	0	0	0	3,990
	Manganese compounds	1,979	1,509	48	0	610	4,146
67-56-1	Methanol	637,102	1,332,095	9,464	0	168	1,978,829
109-86-4	2-Methoxyethanol	26,487	559	0	0	0	27,046
96-33-3	Methyl acrylate	3,532	4,018	0	0	0	7,550
1634-04-4	Methyl tert-butyl ether	227,188	28,626	2,807	0	0	258,621
101-14-4	4,4'-Methylene-bis(2-chloroaniline)	0	0	0	0	0	0
101-68-8	Methylene bis(phenyl-isocyanate) (MDI)	703	158	0	0	0	861
78-93-3	Methyl ethyl ketone	428,048	266,282	0	0	0	694,330
108-10-1	Methyl isobutyl ketone	263,862	92,909	16	0	0	356,787
80-62-6	Methyl methacrylate	4,527	2,282	594	0	0	7,403
	Mixture	356	0	0	0	0	356
1313-27-5	Molybdenum trioxide	5,555	9,513	0	0	0	15,068
76-15-3	Monochloropentafluoroethane (CFC-115)	852	262,043	3,208	0	0	266,103
121-69-7	N,N-Dimethylaniline	310	22	1	0	0	333
91-20-3	Naphthalene	9,048	8,243	7,763	0	56	25,110
7440-02-0	Nickel	3,781	141	0	0	0	3,922
	Nickel compounds	2,145	838	1,445	0	1,058	5,486
7697-37-2	Nitric acid	19,576	24,426	0	0	0	44,002
99-59-2	5-Nitro-o-anisidine	6	7	0	0	0	13
98-95-3	Nitrobenzene	1,157	34	625	0	0	1,816
55-63-0	Nitroglycerin	11,250	1,250	0	0	0	12,500

Footnotes:
see pages 28 and 29

Discharges to POTWs	Off-Site Transfers for Recycling	Off-Site Transfers for Energy Recovery	Off-Site Transfers for Treatment	Off-Site Transfers for Disposal	Other Off-Site Transfers[5]	Total Off-Site Transfers	Number of Forms	Chemical Name
0	0	0	0	0	0	0	1	o-Dinitrobenzene
0	0	0	0	0	0	0	1	p-Dinitrobenzene
31,000	0	0	6	67	0	31,073	4	Epichlorohydrin
0	0	42,536	0	0	0	42,536	1	2-Ethoxyethanol
1	15	15	17,280	3	0	17,314	7	Ethyl acrylate
519	117,469	622,326	12,751	6,287	0	759,352	37	Ethylbenzene
12	0	0	0	0	0	12	7	Ethylene
1,987,527	9,817	18,462	54,865	9,756	0	2,080,427	69	Ethylene glycol
10	0	0	0	0	0	10	9	Ethylene oxide
0	0	0	7,700	0	0	7,700	1	Ethylene thiourea
23,689	0	29,345	69,830	142	0	123,006	26	Formaldehyde
2,812	0	38,174	0	0	0	40,986	10	Formic acid
37,444	901,246	2,123	54,526	0	0	995,339	11	Freon 113
1,394,039	36,562	342,700	594,015	32,516	16,980	2,416,812	84	Glycol ethers
0	0	0	6,665	0	0	6,665	1	Hexachlorobenzene
0	0	0	0	0	0	0	1	Hexachloroethane
0	0	0	0	0	0	0	1	Hexachlorophene
0	0	0	0	0	0	0	3	Hydrazine
0	0	0	0	0	0	0	1	Hydrazine sulfate
53,211	211	2,155	131,517	6,801	0	193,895	108	Hydrochloric acid
0	0	0	95,125	0	0	95,125	10	Hydrogen fluoride
637	0	0	7,393	0	0	8,030	6	Hydroquinone
44,470	0	7,024	1,102	0	0	52,596	3	Isobutyraldehyde
0	0	0	9,688	0	0	9,688	3	Isopropyl alcohol (mfg., strong acid process only)
0	0	23	25	295	0	343	2	4,4'-Isopropylidenediphenol
136	804,049	0	27,177	28,989	0	860,351	18	Lead
34,175	10,792,277	726	731,457	246,705	4,091	11,809,431	37	Lead compounds
21	0	457	36,035	330	0	36,843	18	Maleic anhydride
27	417,229	0	0	1,725	0	418,981	20	Manganese
2,219	762,102	503	3,504	77,873	0	846,201	20	Manganese compounds
18,797,727	460,109	7,479,723	3,193,867	88,311	8,639	30,028,376	105	Methanol
7,579	0	46,464	83	0	0	54,126	3	2-Methoxyethanol
272	13,098	73	86	0	0	13,529	7	Methyl acrylate
6,847	0	139,406	0	16,420	0	162,673	8	Methyl tert-butyl ether
0	0	0	0	0	0	0	1	4,4'-Methylene-bis(2-chloroaniline)
0	0	5,450	13,515	3,129	0	22,094	16	Methylene bis(phenyl-isocyanate (MDI)
38,596	95,357	2,213,403	496,703	95	0	2,844,154	77	Methyl ethyl ketone
68,678	1,020,966	642,438	175,332	0	0	1,907,414	48	Methyl isobutyl ketone
49	15	325	46,103	3	0	46,495	15	Methyl methacrylate
149	0	25	237	5	0	416	3	Mixture
0	92,370	0	17,380	28	0	109,778	5	Molybdenum trioxide
0	0	0	192	0	0	192	1	Monochloropentafluoroethane (CFC-115)
0	0	0	0	0	0	0	2	N,N-Dimethylaniline
249	4,072	49,898	5,766	1,208	0	61,193	22	Naphthalene
2,295	431,203	0	2,247	5,465	0	441,210	24	Nickel
1,000	19,424	13,507	34,030	12,364	1,200	81,525	22	Nickel compounds
139,760	262,711	0	240,766	0	328,711	971,948	40	Nitric acid
16	0	0	0	0	0	16	3	5-Nitro-o-anisidine
0	0	0	19	1,200	0	1,219	1	Nitrobenzene
0	0	0	0	126	0	126	2	Nitroglycerin

Footnotes:
see pages 28 and 29

Table 3. 1994 RPPR On-Site Releases and Off-Site Transfers Reported by New Jersey Facilities,[1] continued (ordered alphabetically by chemical name; releases and transfers reported in pounds per year)

CAS #	Chemical Name	Stack Air Emissions	Fugitive Air Emissions	Discharges to Surface Water	Discharges to Ground Water	On-Site Land Disposal	Total On-Site Releases[2]
99-55-8	5-Nitro-o-toluidine	4	4	0	0	0	8
79-21-0	Peracetic acid	8	10	0	0	0	18
108-95-2	Phenol	16,957	3,423	3,005	0	0	23,385
106-50-3	p-Phenylenediamine	2,112	91	1,260	0	2,624	6,087
90-43-7	2-Phenylphenol	1	31	0	0	0	32
75-44-5	Phosgene	1,131	36	0	0	0	1,167
7664-38-2	Phosphoric acid	5,769	2,770	0	0	0	8,539
7723-14-0	Phosphorus (yellow or white)	0	0	0	0	0	0
85-44-9	Phthalic anhydride	11,446	2,255	105	0	0	13,806
88-89-1	Picric acid	0	0	0	0	0	0
123-38-6	Propionaldehyde	2,568	988	0	0	0	3,556
115-07-1	Propylene	29,537	158,031	0	0	0	187,568
75-55-8	Propyleneimine	158	10	0	0	0	168
75-56-9	Propylene oxide	1,294	4,300	0	0	0	5,594
110-86-1	Pyridine	2,171	9	0	0	0	2,180
7782-49-2	Selenium	5	4	0	0	0	9
	Selenium compounds	253	254	0	0	0	507
7440-22-4	Silver	1,117	1,988	0	0	0	3,105
	Silver compounds	54	3	0	0	0	57
100-42-5	Styrene	97,879	14,260	246	0	0	112,385
96-09-3	Styrene oxide	3	1	0	0	0	4
7664-93-9	Sulfuric acid (acid aerosol forms only)[6]	38,404	25,648	0	0	0	64,052
127-18-4	Tetrachloroethylene	3,785	41,801	0	0	0	45,586
961-11-5	Tetrachlorvinphos	100	20	0	0	0	120
62-56-6	Thiourea	500	100	12	0	0	612
137-26-8	Thiram	0	0	0	0	0	0
7550-45-0	Titanium tetrachloride	510	894	0	0	0	1,404
108-88-3	Toluene	860,148	784,267	6,357	0	2	1,650,774
584-84-9	Toluene-2,4-diisocyanate	17	1	0	0	0	18
91-08-7	Toluene-2,6-diisocyanate	12	0	0	0	0	12
26471-62-5	Toluenediisocyanate (mixed isomers)	81	10	0	0	0	91
95-53-4	o-Toluidine	693	197	6	0	0	896
71-55-6	1,1,1-Trichloroethane	215,589	268,010	0	0	0	483,599
79-01-6	Trichloroethylene	23,877	339,730	0	0	0	363,607
75-69-4	Trichlorofluoromethane (CFC-11)	15,458	25,310	0	0	0	40,768
95-63-6	1,2,4-Trimethylbenzene	125,967	41,279	18	0	10	167,274
108-05-4	Vinyl acetate	88,259	14,783	13	0	0	103,055
75-01-4	Vinyl chloride	30,829	12,500	34	0	0	43,363
75-35-4	Vinylidene chloride	6	119	0	0	0	125
95-47-6	o-Xylene	1,150	1,078	0	0	0	2,228
1330-20-7	Xylene (mixed isomers)	890,154	501,980	8,658	0	5	1,400,797
87-62-7	2,6-Xylidine	114	16	66	0	0	196
7440-66-6	Zinc (fume or dust)	44,261	16,886	18	0	0	61,165
	Zinc compounds	5,606	10,651	4,524	0	0	20,781
1994 TOTALS		7,655,906	6,433,966	774,885	6	201,716	15,066,479

Footnotes:
1. All reporting facilities are included in this summary; these data include two non-manufacturing sector facilities that submitted five RPPR reports.
2. Total On-Site Releases = air emissions + surface water discharges + ground water discharges + land releases.
3. "POTW" means publicly owned treatment works (municipal or public sewage system).

Discharges to POTWs	Off-Site Transfers for Recycling	Off-Site Transfers for Energy Recovery	Off-Site Transfers for Treatment	Off-Site Transfers for Disposal	Other Off-Site Transfers[5]	Total Off-Site Transfers	Number of Forms	Chemical Name
50	0	0	0	0	0	50	2	5-Nitro-o-toluidine
0	0	0	0	0	0	0	1	Peracetic acid
395,626	0	5,404	45,400	141	0	446,571	13	Phenol
380	0	0	21,420	145	0	21,945	3	p-Phenylenediamine
353	0	0	0	2	0	355	2	2-Phenylphenol
0	0	0	0	0	0	0	2	Phosgene
141,298	17,000	0	41,114	14,221	0	213,633	70	Phosphoric acid
0	0	0	46,100	0	0	46,100	1	Phosphorus (yellow or white)
1,145	0	40	47,841	2,492	0	51,518	19	Phthalic anhydride
0	0	0	0	0	0	0	1	Picric acid
64	0	0	0	0	0	64	3	Propionaldehyde
0	0	0	0	0	0	0	12	Propylene
0	0	0	0	0	0	0	1	Propyleneimine
10	0	0	10	0	0	20	6	Propylene oxide
544	0	0	12,467	0	0	13,011	1	Pyridine
1	0	0	0	28,325	0	28,326	1	Selenium
0	0	0	178	9	794	981	3	Selenium compounds
53	8,506	0	444	0	0	9,003	6	Silver
896	6,550	0	3,089	0	0	10,535	5	Silver compounds
277	52	7,476	12,745	482	0	21,032	22	Styrene
0	0	0	0	0	0	0	2	Styrene oxide
25,797	38,496,658	0	156,287	179,989	0	38,858,731	112	Sulfuric acid (acid aerosol forms only)[6]
0	2,145	0	8,950	46,241	0	57,336	7	Tetrachloroethylene
0	0	0	0	0	0	0	1	Tetrachlorvinphos
0	0	0	0	2,051	0	2,051	2	Thiourea
0	0	0	1,678	0	0	1,678	1	Thiram
0	0	0	5,670	0	0	5,670	3	Titanium tetrachloride
118,737	793,082	4,582,942	917,493	2,136,786	0	8,549,040	124	Toluene
0	0	0	1	0	0	1	4	Toluene-2,4-diisocyanate
0	0	0	0	0	0	0	2	Toluene-2,6-diisocyanate
0	0	0	0	0	0	0	4	Toluenediisocyanate (mixed isomers)
9,958	0	0	35,600	0	0	45,558	5	o-Toluidine
36	279,813	16,152	22,839	5,455	0	324,295	43	1,1,1-Trichloroethane
666	276,415	12,947	1,426	0	0	291,454	10	Trichloroethylene
0	0	160,296	25,948	0	0	186,244	4	Trichlorofluoromethane (CFC-11)
168,826	11,053	52,052	10,380	3,422	973	246,706	34	1,2,4-Trimethylbenzene
2,996	7,308	278	8,471	322	0	19,375	14	Vinyl acetate
0	0	0	0	114	0	114	3	Vinyl chloride
2	0	0	639	0	0	641	2	Vinylidene chloride
1,105	12,701	69,394	11,850	0	0	95,050	3	o-Xylene
20,126	564,736	3,865,344	371,086	49,438	24,199	4,894,929	98	Xylene (mixed isomers)
263	0	0	451	0	0	714	3	2,6-Xylidine
19	9,565,170	13,227	0	14,600	0	9,593,016	11	Zinc (fume or dust)
3,932	463,118	2,287	94,133	873,148	0	1,436,618	73	Zinc compounds
29,470,659	87,136,484	22,961,935	10,127,361	4,306,310	389,501	154,392,250	2,470	1994 TOTALS

Footnotes:

4. Total Off-Site Transfers = discharges to POTWs + all other off-site transfers (for recycling, energy recovery, treatment and/or disposal, as well as those incorrectly coded and listed under "other off-site transfers").
5. Off-site transfers reported with incorrect codes or no codes regarding method of off-site management.
6. USEPA modified the reporting requirements for sulfuric acid from "solution" to "acid aerosol forms only" for RY 1994 and offered facilities the option to revise their submissions. As noted by the large quantities of off-site transfers reported, it is apparent that many facilities did not exercise this option.

Table 4. 1994 RPPR On-Site Releases and Off-Site Transfers Reported by New Jersey Facilities[1] (ordered alphabetically by county; releases and transfers reported in pounds per year)

County	Stack Air Emissions	Fugitive Air Emissions	Discharges to Surface Water	Discharges to Ground Water	On-Site Land Disposal	Total On-Site Releases[2]
Atlantic	6,522	3,601	1	0	0	10,124
Bergen	822,436	230,201	0	0	0	1,052,637
Burlington	335,680	184,433	23,401	5	36,902	580,421
Camden	360,857	148,582	0	0	0	509,439
Cape May	0	0	0	0	0	0
Cumberland	85,907	359	0	0	0	86,266
Essex	543,546	551,198	115	0	0	1,094,859
Gloucester	556,356	437,185	48,173	0	0	1,041,714
Hudson	63,407	1,321,141	144,035	0	0	1,528,583
Hunterdon	82,571	11,971	50	0	0	94,592
Mercer	205,170	111,899	0	0	0	317,069
Middlesex	2,486,958	845,703	12,442	1	1,096	3,346,200
Monmouth	40,102	84,369	0	0	0	124,471
Morris	123,532	98,868	364	0	0	222,764
Ocean	2,109	17,619	0	0	0	19,728
Passaic	353,240	247,130	4	0	0	600,374
Salem	317,458	950,479	509,119	0	161,071	1,938,127
Somerset	65,105	48,737	9	0	964	114,815
Sussex	57,066	53,614	0	0	0	110,680
Union	1,028,774	732,327	29,648	0	0	1,790,749
Warren	119,110	354,550	7,524	0	1,683	482,867
1994 TOTALS	7,655,906	6,433,966	774,885	6	201,716	15,066,479

Footnotes:

1. All reporting facilities are included in this summary; these data include two non-manufacturing sector facilities that submitted five RPPR reports.
2. Total On-Site Releases = air emissions + surface water discharges + ground water discharges + land releases at the facility.

1994 RPPR On-Site Releases/Off-Site Transfers by County

Discharges to POTWs	Off-Site Transfers for Recycling	Off-Site Transfers for Energy Recovery	Off-Site Transfers for Treatment	Off-Site Transfers for Disposal	Other Off-Site Transfers[5]	Total Off-Site Transfers	Number of Facilities	Number of Forms	County
400	53,888	11,700	58,529	0	0	124,517	5	7	Atlantic
2,390,806	4,043,954	2,245,462	221,929	12,756	8,361	8,923,268	82	268	Bergen
3,239	22,187,258	22,921	84,160	239,810	2,782	22,540,170	27	104	Burlington
290	216,783	760,747	69,898	24,816	0	1,072,534	26	76	Camden
0	0	0	0	0	0	0	0	0	Cape May
0	0	6,360	0	351	0	6,711	7	7	Cumberland
13,324,929	625,095	793,569	4,086,260	2,331,206	18,070	21,179,129	78	318	Essex
30,376	918,846	1,173,352	330,797	14,385	1,200	2,468,956	27	158	Gloucester
3,897,293	841,164	542,628	15,224	46,170	0	5,342,479	31	97	Hudson
0	16,817	11,483	22	0	0	28,322	6	17	Hunterdon
1,066	70,388	93,470	68,511	45,520	315	279,270	17	43	Mercer
6,411,684	44,275,218	6,051,698	681,755	889,152	1,801	58,311,308	111	501	Middlesex
76,688	547,073	5,020,514	121,794	18,006	28,188	5,812,263	16	56	Monmouth
12,740	618,511	432,566	107,682	98,447	328,711	1,598,657	36	74	Morris
15	0	0	5,477	0	0	5,492	5	9	Ocean
828,671	2,626,973	887,841	667,815	71,240	0	5,082,540	67	188	Passaic
0	3,610,430	292,238	2,854,159	85,722	0	6,842,549	8	99	Salem
67,280	390,273	194,584	206,992	66,618	50	925,797	25	100	Somerset
0	80,747	0	131,742	0	0	212,489	5	8	Sussex
2,425,167	5,942,919	3,935,678	259,118	332,704	23	12,895,609	66	272	Union
15	70,147	485,124	155,497	29,407	0	740,190	14	68	Warren
29,470,659	87,136,484	22,961,935	10,127,361	4,306,310	389,501	154,392,250	659	2,470	1994 TOTALS

Footnotes:

3. "POTW" means publicly owned treatment works (municipal or public sewage system).
4. Total Off-Site Transfers = discharges to POTWs + all other off-site transfers (for recycling, energy recovery, treatment, and/or disposal, as well as those incorrectly coded and listed under "other off-site transfers").
5. Off-site transfers reported with incorrect codes or no codes regarding method of off-site management.

Table 5. 1994 RPPR On-Site Releases and Off-Site Transfers by New Jersey Facilities[1]
(ordered numerically by SIC code; releases and transfers reported in pounds per year)

SIC Category	Stack Air Emissions	Fugitive Air Emissions	Discharges to Surface Water	Discharges to Ground Water	On-Site Land Disposal	Total On-Site Releases[2]
20 Food & Kindred Products	181,358	1,258,644	0	0	0	1,440,002
21 Tobacco Manufacturing	0	0	0	0	0	0
22 Textile Mill Products	128,968	116,618	0	0	0	245,586
23 Apparel & Other Textile Products	0	0	0	0	0	0
24 Lumber & Wood Products	97,344	13,747	0	0	0	111,091
25 Furniture & Fixtures	18,601	1,729	0	0	0	20,330
26 Paper & Allied Products	535,638	251,616	0	0	0	787,254
27 Printing & Publishing	127,212	93,332	0	0	0	220,544
28 Chemicals & Allied Products	2,702,061	1,971,888	715,754	1	161,073	5,550,777
29 Petroleum & Coal Products	428,260	625,920	58,884	0	1,096	1,114,160
30 Rubber & Misc. Plastics Products	366,671	284,613	20	5	0	651,309
31 Leather & Leather Products	20,405	19,588	0	0	0	39,993
32 Stone, Clay & Glass Products	188,564	13,775	1	0	964	203,304
33 Primary Metal Industries	207,930	425,376	118	0	36,900	670,324
34 Fabricated Metal Products	1,088,866	840,748	102	0	1	1,929,716
35 Machinery, except Electrical	18,510	220,290	0	0	1,683	240,483
36 Electrical & Electronic Products	104,490	117,959	6	0	0	222,455
37 Transportation Equipment	1,214,097	70,554	0	0	0	1,284,651
38 Instruments & Related Products	132,441	90,922	0	0	0	223,363
39 Miscellaneous Manufacturing	94,490	16,595	0	0	0	111,085
TOTAL (Manufacturing Sector)	7,655,906	6,433,914	774,885	6	201,716	15,066,427
Non-Manufacturing Sector	0	52	0	0	0	52
1994 TOTALS	7,655,906	6,433,966	774,885	6	201,716	15,066,479

Footnotes:
1. All reporting facilities are included in this summary; these data include three non-manufacturing sector facilities that submitted eight RPPR reports.
2. Total On-Site Releases = air emissions + surface water discharges + ground water discharges + land releases at the facility.

1994 RPPR On-Site Releases/Off-Site Transfers by SIC Code

Discharges to POTWs	Off-Site Transfers for Recycling	Off-Site Transfers for Energy Recovery	Off-Site Transfers for Treatment	Off-Site Transfers for Disposal	Other Off-Site Transfers[4]	Total Off-Site Transfers	Number of Facilities	Number of Forms	SIC Code
348,421	8,280	642,354	94,010	610	0	1,093,675	29	63	20
0	0	0	0	0	0	0	0	0	21
368,354	2,889	4,082	29,995	0	0	405,320	18	36	22
0	0	0	0	0	0	0	0	0	23
0	0	0	6,214	25,248	0	31,462	4	7	24
0	0	6,360	0	0	0	6,360	2	2	25
289,479	11,348	1,045,194	153,748	73,230	0	1,572,999	22	49	26
842	27,381	86,491	124,470	605	2,782	242,571	12	27	27
25,297,631	27,798,096	19,324,378	8,005,539	3,472,411	366,718	84,264,773	262	1,376	28
51	20,624,824	184	50,910	69,741	1,200	20,746,910	17	117	29
82,508	120,622	200,030	242,416	81,061	0	726,637	56	127	30
293,248	0	0	64,357	0	0	357,605	3	13	31
123,858	60,690	40,139	208,964	38,400	0	472,051	13	33	32
2,247,115	20,982,646	101,950	195,733	260,455	0	23,787,899	57	173	33
148,230	4,896,062	1,138,821	644,341	106,750	8,361	6,942,565	81	239	34
17,380	433,971	0	30,133	2,058	0	483,542	20	53	35
1,266	10,446,642	17,330	9,797	24,956	8,639	10,508,630	28	38	36
32,315	1,044,520	159,182	14,720	39,570	0	1,290,307	5	34	37
219,756	678,508	5,415	246,337	58,480	1,801	1,210,297	20	61	38
9	5	190,025	5,677	52,735	0	248,451	8	17	39
29,470,267	87,136,484	22,961,935	10,127,361	4,306,310	389,501	154,392,054	657	2,465	Mfg. Sector
196	0	0	0	0	0	0	2	5	Non-Mfg. Sector
29,470,463	87,136,484	22,961,935	10,127,361	4,306,310	389,501	154,392,054	659	2,470	1994 TOTALS

Footnotes:

3. "POTW" means publicly owned treatment works (municipal or public sewage system).
4. Total Off-Site Transfers = discharges to POTWs + all other off-site transfers (for recycling, energy recovery, treatment, and/or disposal, as well as those incorrectly coded and listed under "other off-site transfers").
5. Off-site transfers reported with incorrect codes or no codes regarding method of off-site management.

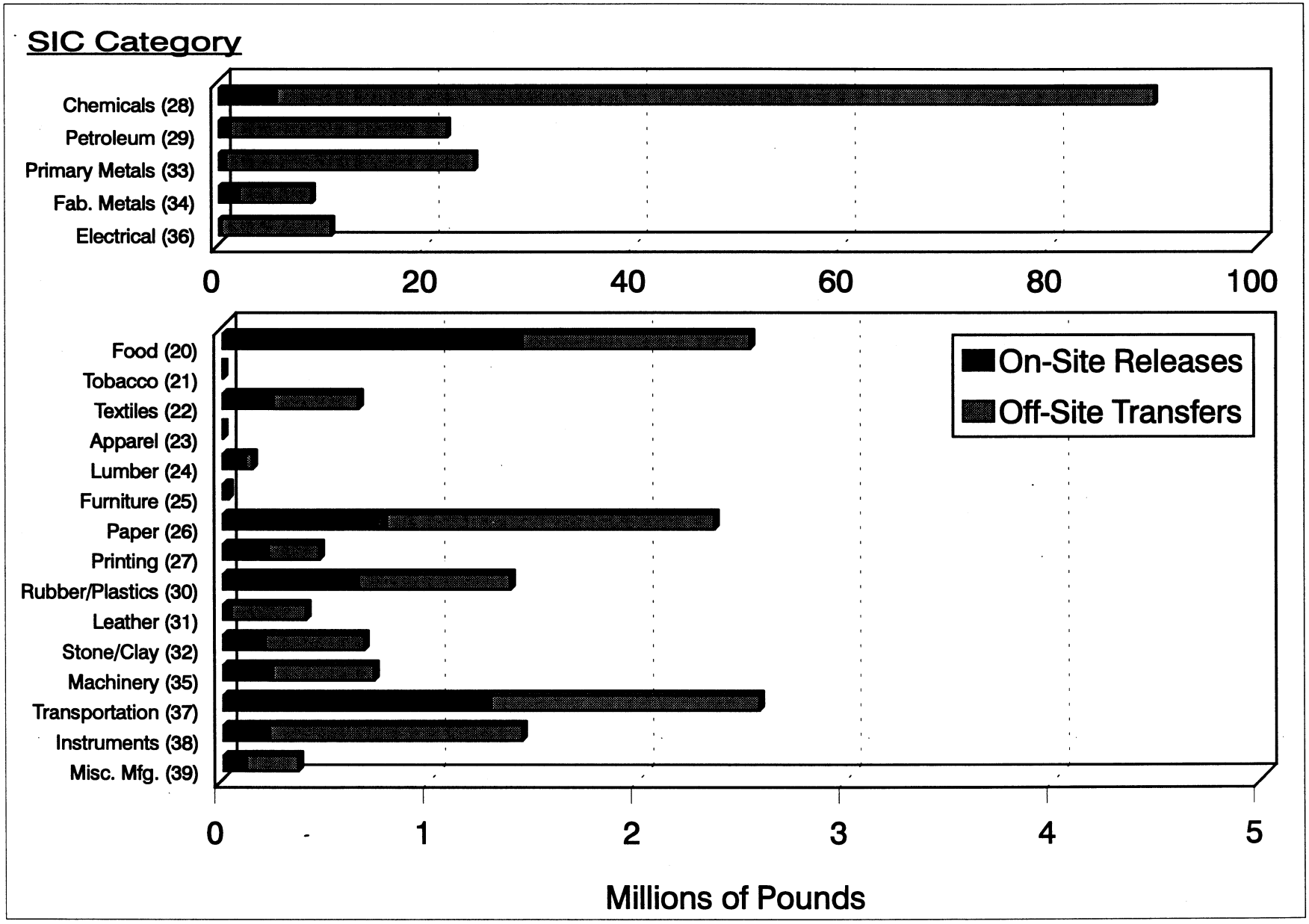


Figure 9. 1994 RPPR Releases and Transfers by Industrial Classification

Table 6. 1994 Release and Pollution Prevention Report

Stack Emissions[1] to the Air (reported in pounds)[2]

Top 10 Chemicals Emitted in the Largest Quantities (Stack Air)

Rank 94	Rank 93	CAS #[3]	Chemical Name	Pounds per Year	% of Total
1	3		Xylenes[4]	891,304	12.7
2	1	108-88-3	Toluene	860,148	12.2
3	8	75-09-2	Dichloromethane	660,327	9.4
4	2	67-56-1	Methanol	637,102	9.0
5	5		Glycol ethers	575,325	8.2
6	6	71-36-3	n-Butyl alcohol	482,168	6.9
7	4	78-93-3	Methyl ethyl ketone	428,048	6.1
8	9	108-10-1	Methyl isobutyl ketone	263,862	3.8
9	11	1634-04-4	Methyl tert-butyl ether	227,188	3.2
10	7	71-55-6	1,1,1-Trichloroethane	215,589	3.1
				5,241,061	74.6

Top 10 Reported Stack Air Emissions of a Single Chemical

Rank 94	Rank 93	Facility Name	County	City	Chemical	Pounds per Year
1	221	Biocraft Laboratories Inc	Bergen	Waldwick	Dichloromethane	520,030
2	2	Ford Motor Company	Middlesex	Edison Twp	Xylene (mixed isomers)	372,140
3	1	Permacel A Nitto Denko Company	Middlesex	North Brunswick Twp	Toluene	296,827
4	21	General Motors Corp	Union	Linden	Xylene (mixed isomers)	149,749
5	115	Sybron Chemicals Inc	Burlington	Pemberton Twp	1,2-Dichloropropane	146,296
6	17	Bayway Refining Co	Union	Linden	Methyl tert-butyl ether	143,000
7	3	Penick Corporation	Essex	Newark	Methanol	132,634
8	4	National Can Company	Middlesex	Piscataway Twp	Glycol ethers	128,569
9	5	National Can Company	Middlesex	Piscataway Twp	N-butyl alcohol	122,060
10	29	Ford Motor Company	Middlesex	Edison Twp	Methyl isobutyl ketone	110,100

Top 10 Facilities for Total Stack Air Emissions

Rank 94	Rank 93	Facility Name	County	City	Pounds per Year	% of Total
1	1	Ford Motor Company	Middlesex	Edison Twp	758,681	10.8
2	149	Biocraft Laboratories Inc	Bergen	Waldwick	520,030	7.4
3	6	General Motors Corp	Union	Linden	372,385	5.3
4	2	Permacel A Nitto Denko Company	Middlesex	North Brunswick Twp	305,321	4.3
5	3	National Can Company	Middlesex	Piscataway Twp	250,647	3.6
6	7	Du Pont Chambers Works	Salem	Pennsville Twp	234,941	3.3
7	12	Bayway Refining Co	Union	Linden	200,926	2.9
8	73	American National Can Company	Middlesex	South Brunswick Twp	180,914	2.6
9	30	Sybron Chemicals Inc	Burlington	Pemberton Twp	167,385	2.4
10	16	Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	140,642	2.0
					3,131,872	44.6

Footnotes:

1. Stack emissions are those releases to the air that occur through stacks, vents, ducts, pipes, or any other confined air streams.
2. Reported quantities for ammonia and sulfuric acid were excluded from summaries in Tables 6 through 17.
3. Chemical Abstracts Service Registry Number; compound categories do not have CAS numbers.
4. Includes o-xylene (CAS# 95-47-6) and xylene (mixed isomers) (CAS# 1330-20-7).

Table 7. 1994 Release and Pollution Prevention Report

Fugitive[1] Emissions to the Air (reported in pounds)[2]

Top 10 Chemicals Emitted in the Largest Quantities (Fugitive Air)

Rank 94	Rank 93	CAS #[3]	Chemical Name	Pounds per Year	% of Total
1	8	67-56-1	Methanol	1,332,095	21.5
2	1	108-88-3	Toluene	784,267	12.7
3	2		Xylenes[4]	503,058	8.1
4	4	79-01-6	Trichloroethylene	339,730	5.5
5	3	71-55-6	1,1,1-Trichloroethane	268,010	4.3
6	5	78-93-3	Methyl ethyl ketone	266,282	4.3
7	NC	75-45-6	Chlorodifluoromethane (HCFC-22)	262,916	4.2
8	16	76-15-3	Monochloropentafluoroethane (CFC-115)	262,043	4.2
9	NC	2837-89-0	2-Chloro-1,1,2,2-tetrafluoroethane (HCFC-124)	212,266	3.4
10	13	76-14-2	Dichlorotetrafluoroethane	165,633	2.7
				4,396,300	70.9

Top 10 Reported Fugitive Air Emissions of a Single Chemical

Rank 94	Rank 93	Facility Name	County	City	Chemical	Pounds per Year
1	NR	Meer Corporation	Hudson	North Bergen Twp	Methanol	1,170,740
2	9	Du Pont Chambers Works	Salem	Pennsville Twp	Monochloropentafluoroethane	262,043
3	1	Peerless Tube Company	Essex	Bloomfield	Trichloroethylene	217,818
4	NC	Du Pont Chambers Works	Salem	Pennsville Twp	2-Chloro-1,1,2,2-tetra-fluoroethane (HCFC-124)	212,266
5	607[5]	Atlantic States Cast Iron Pipe	Warren	Phillipsburg	Toluene	193,548
6	3	Du Pont Chambers Works	Salem	Pennsville Twp	Dichlorotetrafluoroethane	165,633
7	NC	Du Pont Chambers Works	Salem	Pennsville Twp	Chlorodifluoromethane (HCFC-22)	130,271
8	13	United States Pipe And Foundry	Burlington	Burlington	Xylene (mixed isomers)	90,689
9	17	Permacel A Nitto Denko Company	Middlesex	North Brunswick Twp	Toluene	84,296
10	30	Du Pont Chambers Works	Salem	Pennsville Twp	Freon 113	81,113

Top 10 Facilities for Total Fugitive Air Emissions

Rank 94	Rank 93	Facility Name	County	City	Pounds per Year	% of Total
1	NR	Meer Corporation	Hudson	North Bergen Twp	1,170,740	18.9
2	1	Du Pont Chambers Works	Salem	Pennsville Twp	918,569	14.8
3	8	Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	230,540	3.7
4	2	Peerless Tube Company	Essex	Bloomfield	228,679	3.7
5	3	Bayway Refining Co	Union	Linden	217,980	3.5
6	298[6]	Atlantic States Cast Iron Pipe	Warren	Phillipsburg	194,556	3.1
7	4	Dri Print Foils Inc	Union	Rahway	109,812	1.8
8	13	United States Pipe And Foundry	Burlington	Burlington	104,973	1.7
9	12	Hoffmann La Roche Inc	Warren	White Twp	96,836	1.6
10	15	Permacel A Nitto Denko Company	Middlesex	North Brunswick Twp	96,105	1.6
					3,368,790	54.4

Footnotes:

1. Fugitive emissions are those releases to the air that are not released through stack, vents, ducts, pipes, or any other confined air stream.
2. Reported quantities for ammonia and sulfuric acid were excluded from summaries in Tables 6 through 17.
3. Chemical Abstracts Service Registry Number; compound categories do not have CAS numbers.
4. Includes o-xylene (CAS# 95-47-6) and xylene (mixed isomers) (CAS# 1330-20-7).
5. One of 11 chemical records that had 400 pounds of fugitive emissions reported for 1993.
6. One of four facilities that had 400 pounds of total fugitive emissions reported for 1993.

NC A newly reportable chemical for 1994; was not reportable for 1993.
NR No Report, i.e. the facility did not report in 1993.

Table 8. 1994 Release and Pollution Prevention Report

Total Emissions to the Air[1] (reported in pounds)[2]

Top 10 Chemicals Emitted in the Largest Quantities (Total Air)

Rank 94	Rank 93	CAS #[3]	Chemical Name	Pounds per Year	% of Total
1	3	67-56-1	Methanol	1,969,197	14.9
2	1	108-88-3	Toluene	1,644,415	12.4
3	2		Xylenes[4]	1,394,362	10.5
4	8	75-09-2	Dichloromethane	814,115	6.2
5	4	78-93-3	Methyl ethyl ketone	694,330	5.3
6	6		Glycol ethers	693,089	5.2
7	7	71-36-3	n-Butyl alcohol	557,593	4.2
8	5	71-55-6	1,1,1-Trichloroethane	483,599	3.7
9	9	79-01-6	Trichloroethylene	363,607	2.7
10	10	108-10-1	Methyl isobutyl ketone	356,771	2.7
				8,971,078	67.8

Top 10 Reported Total Air Emissions of a Single Chemical

Rank 94	Rank 93	Facility Name	County	City	Chemical	Pounds per Year
1	NR	Meer Corporation	Hudson	North Bergen Twp	Methanol	1,173,000
2	302	Biocraft Laboratories Inc	Bergen	Waldwick	Dichloromethane	521,913
3	1	Permacel A Nitto Denko Company	Middlesex	North Brunswick Twp	Toluene	381,123
4	2	Ford Motor Company	Middlesex	Edison Twp	Xylene (mixed isomers)	377,462
5	25	Du Pont Chambers Works	Salem	Pennsville Twp	Monochloropentafluoroethane	262,895
6	3	Peerless Tube Company	Essex	Bloomfield	Trichloroethylene	224,481
7	NC	Du Pont Chambers Works	Salem	Pennsville Twp	2-Chloro-1,1,2,2-tetra-fluoroethane (HCFC-124)	216,667
8	946[5]	Atlantic States Cast Iron Pipe	Warren	Phillipsburg	Toluene	193,548
9	5	Du Pont Chambers Works	Salem	Pennsville Twp	Dichlorotetrafluoroethane	166,721
10	46	General Motors Corp	Union	Linden	Xylene (mixed isomers)	162,413

Top 10 Facilities for Total Air Emissions

Rank 94	Rank 93	Facility Name	County	City	Pounds per Year	% of Total
1	NR	Meer Corporation	Hudson	North Bergen Twp	1,173,000	8.9
2	2	Du Pont Chambers Works	Salem	Pennsville Twp	1,153,510	8.7
3	1	Ford Motor Company	Middlesex	Edison Twp	795,205	6.0
4	205	Biocraft Laboratories Inc	Bergen	Waldwick	521,918	3.9
5	3	Bayway Refining Co	Union	Linden	418,906	3.2
6	4	Permacel A Nitto Denko Company	Middlesex	North Brunswick Twp	401,426	3.0
7	14	General Motors Corp	Union	Linden	394,273	3.0
8	10	Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	371,182	2.8
9	8	National Can Company	Middlesex	Piscataway Twp	293,353	2.2
10	5	Peerless Tube Company	Essex	Bloomfield	268,160	2.0
					5,790,933	43.7

Footnotes:

1. Total air emissions = stack air emissions + fugitive air emissions.
2. Reported quantities for ammonia and sulfuric acid were excluded from summaries in Tables 6 through 17.
3. Chemical Abstracts Service Registry Number; compound categories do not have CAS numbers.
4. Includes o-xylene (CAS# 95-47-6) and xylene (mixed isomers) (CAS# 1330-20-7).
5. One of seven chemical records for which total air emissions equaled 400 pounds for 1993.

NR No Report, i.e. the facility did not report in 1993.

NC A newly reportable chemical for 1994; was not reportable for 1993.

Table 9. 1994 Release and Pollution Prevention Report

Surface Water Discharges (reported in pounds)[2]

Top 10 Chemicals Discharged in the Largest Quantities (Surface Waters)

Rank 94	Rank 93	CAS #[1]	Chemical Name	Pounds per Year	% of Total
1	1	6484-52-2	Ammonium nitrate (solution)	184,775	62.1
2	4	74-87-3	Chloromethane	17,157	5.8
3	8	67-56-1	Methanol	9,464	3.2
4	6	1330-20-7	Xylene (mixed isomers)	8,658	2.9
5	9	91-20-3	Naphthalene	7,763	2.6
6	5	7782-50-5	Chlorine	7,270	2.4
7	7	108-88-3	Toluene	6,357	2.1
8	10	76-14-2	Dichlorotetrafluoroethane	5,940	2.0
9	3		Dinitrobenzene isomers[3]	5,915	2.0
10	11		Zinc compounds	4,524	1.5
				257,823	86.6

Top 10 Reported Surface Water Discharges of a Single Chemical

Rank 94	Rank 93	Facility Name	County	City	Chemical	Pounds per Year
1	1	E M Industries Inc Rona Div	Hudson	Bayonne	Ammonium nitrate (solution)	144,020
2	2	Du Pont Chambers Works	Salem	Pennsville Twp	Ammonium nitrate (solution)	40,755
3	5	Du Pont Chambers Works	Salem	Pennsville Twp	Chloromethane	17,157
4	7	Bayway Refining Co	Union	Linden	Xylene (mixed isomers)	8,650
5	10	Mobil Oil Corporation	Gloucester	Greenwich Twp	Naphthalene	7,400
6	9	Sybron Chemicals Inc	Burlington	Pemberton Twp	Methanol	7,187
7	8	Bayway Refining Co	Union	Linden	Toluene	6,050
8	11	Du Pont Chambers Works	Salem	Pennsville Twp	Dichlorotetrafluoroethane	5,940
9	4	Du Pont Chambers Works	Salem	Pennsville Twp	m-Dinitrobenzene	5,087
10	13	Sybron Chemicals Inc	Burlington	Pemberton Twp	Formaldehyde	4,023

Top 10 Facilities for Total Surface Water Discharges

Rank 94	Rank 93	Facility Name	County	City	Pounds per Year	% of Total
1	1	E M Industries Inc Rona Div	Hudson	Bayonne	144,020	48.4
2	2	Du Pont Chambers Works	Salem	Pennsville Twp	92,155	31.0
3	4	Bayway Refining Co	Union	Linden	18,234	6.1
4	5	Sybron Chemicals Inc	Burlington	Pemberton Twp	13,645	4.6
5	6	Mobil Oil Corporation	Gloucester	Greenwich Twp	10,383	3.5
6	7	Hoffmann La Roche Inc	Warren	White Twp	5,128	1.7
7	9	Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	4,885	1.7
8	8	Exxon Chemical Company	Union	Linden	4,829	1.6
9	16	Monsanto Company	Gloucester	Logan Twp	1,813	0.6
10	12	Amerada Hess Port Reading Corp	Middlesex	Woodbridge Twp	921	0.3
					296,013	99.5

Footnotes:

1. Chemical Abstracts Service Registry Number.
2. Reported quantities for ammonia and sulfuric acid were excluded from summaries in Tables 6 through 17.
3. Includes m-dinitrobenzene (CAS# 99-65-0), o-dinitrobenzene (CAS# 528-29-0) and p-dinitrobenzene (CAS# 100-25-4).

Table 10. 1994 Release and Pollution Prevention Report

On-Site Releases to Land (reported in pounds)[1]

Top 10 Chemicals Released in the Largest Quantities (Land)

Rank 94	Rank 93	CAS #[2]	Chemical Name	Pounds per Year	% of Total
1	13		Dinitrobenzene isomers[3]	95,100	47.1
2	2		Lead and compounds[4]	57,842	28.7
3	*[5]	95-50-1	1,2-Dichlorobenzene	24,287	12.1
4	12		Chromium compounds	17,914	8.9
5	11	106-50-3	p-Phenylenediamine	2,624	1.3
6	5	7440-50-8	Copper	1,683	0.8
7	3		Nickel compounds	1,058	0.5
8	4		Manganese compounds	610	0.3
9	*[5]	67-56-1	Methanol	168	0.1
10	*[5]		Cobalt compounds	153	0.1
				201,439	99.9

Top 10 Reported On-Site Land Releases of a Single Chemical

Rank 94	Rank 93	Facility Name	County	City	Chemical	Pounds per Year
1	15	Du Pont Chambers Works	Salem	Pennsville Twp	m-Dinitrobenzene	95,086
2	4	Griffin Pipe Products Co	Burlington	Florence Twp	Lead	36,900
3	*[6]	Du Pont Chambers Works	Salem	Pennsville Twp	1,2-Dichlorobenzene	24,287
4	*[6]	Du Pont Chambers Works	Salem	Pennsville Twp	Lead compounds	20,941
5	*[6]	Du Pont Chambers Works	Salem	Pennsville Twp	Chromium compounds	17,763
6	13	Du Pont Chambers Works	Salem	Pennsville Twp	p-Phenylenediamine	2,624
7	*[6]	Ingersoll Rand Co Dresser Ind	Warren	Phillipsburg	Copper	1,683
8	*[6]	Amerada Hess Port Reading Corp	Middlesex	Woodbridge Twp	Nickel compounds	1,058
8	NA	3 M Corporation	Somerset	Montgomery Twp	Manganese compounds	610
9	*[6]	Du Pont Chambers Works	Salem	Pennsville Twp	Methanol	168

Top 6 Facilities for Total On-Site Land Releases[7]

Rank 94	Rank 93	Facility Name	County	City	Pounds per Year	% of Total
1	4	Du Pont Chambers Works	Salem	Pennsville Twp	161,071	79.9
2	3	Griffin Pipe Products Co	Burlington	Florence Twp	36,900	18.3
3	*[8]	Ingersoll Rand Co Dresser Ind	Warren	Phillipsburg	1,683	0.8
4	7	Amerada Hess Port Reading Corp	Middlesex	Woodbridge Twp	1,096	0.5
5	10	3 M Corporation	Somerset	Montgomery Twp	964	0.5
6	*[8]	Stonhard Inc	Burlington	Maple Shade Twp	2	0.0
					201,716	100.0

Footnotes:

1. Reported quantities for ammonia and sulfuric acid were excluded from summaries in Tables 6 through 17.
2. Chemical Abstracts Service Registry Number; compound categories do not have CAS numbers.
3. Includes m-dinitrobenzene (CAS# 99-65-0), o-dinitrobenzene (CAS# 528-29-0) and p-dinitrobenzene (CAS# 100-25-4).
4. Includes both lead (CAS# 7439-92-1) and "lead compounds."
5. One of 169 chemicals (of the total of 188) that had no on-site land releases reported for 1993.
6. One of 2,339 chemical records (of the total of 2,363) that had no on-site land releases reported for 1993.
7. Only six facilities reported on-site land releases for 1994.
8. One of 621 facilities (of the total of 632) that had no on-site land releases reported for 1993.

NA Not Applicable, i.e. the facility did not report this chemical in 1993.

Table 11. 1994 Release and Pollution Prevention Report

Total On-Site Releases[1] (reported in pounds)[2]

Top 10 Chemicals Released On Site in the Largest Quantities

Rank 94	Rank 93	CAS #[3]	Chemical Name	Pounds per Year	% of Total
1	3	67-56-1	Methanol	1,978,829	14.4
2	1	108-88-3	Toluene	1,650,772	12.0
3	2		Xylenes[4]	1,403,025	10.2
4	9	75-09-2	Dichloromethane	815,102	5.9
5	4	78-93-3	Methyl ethyl ketone	694,330	5.1
6	6		Glycol ethers	693,094	5.1
7	8	71-36-3	n-Butyl alcohol	558,676	4.1
8	5	71-55-6	1,1,1-Trichloroethane	483,599	3.5
9	10	79-01-6	Trichloroethylene	363,607	2.6
10	11	108-10-1	Methyl isobutyl ketone	356,787	2.6
				8,997,821	65.5

Top 10 Reported Total On-Site Releases of a Single Chemical

Rank 94	Rank 93	Facility Name	County	City	Chemical	Pounds per Year
1	NR	Meer Corporation	Hudson	North Bergen Twp	Methanol	1,173,000
2	316	Biocraft Laboratories Inc	Bergen	Waldwick	Dichloromethane	521,913
3	2	Permacel A Nitto Denko Company	Middlesex	North Brunswick Twp	Toluene	381,123
4	3	Ford Motor Company	Middlesex	Edison Twp	Xylene (mixed isomers)	377,462
5	26	Du Pont Chambers Works	Salem	Pennsville Twp	Monochloropentafluoroethane	266,103
6	4	Peerless Tube Company	Essex	Bloomfield	Trichloroethylene	224,481
7	NC	Du Pont Chambers Works	Salem	Pennsville Twp	2-Chloro-1,1,2,2-tetra-fluoroethane (HCFC-124)	217,973
8	966	Atlantic States Cast Iron Pipe	Warren	Phillipsburg	Toluene	193,548
9	8	Du Pont Chambers Works	Salem	Pennsville Twp	Dichlorotetrafluoroethane	172,661
10	49	General Motors Corp	Union	Linden	Xylene (mixed isomers)	162,413

Top 10 Facilities for Total On-Site Releases

Rank 94	Rank 93	Facility Name	County	City	Pounds per Year	% of Total
1	1	Du Pont Chambers Works	Salem	Pennsville Twp	1,406,736	10.3
2	NR	Meer Corporation	Hudson	North Bergen Twp	1,173,000	8.5
3	2	Ford Motor Company	Middlesex	Edison Twp	795,205	5.8
4	207	Biocraft Laboratories Inc	Bergen	Waldwick	521,918	3.8
5	4	Bayway Refining Co	Union	Linden	437,140	3.2
6	5	Permacel A Nitto Denko Company	Middlesex	North Brunswick Twp	401,426	2.9
7	16	General Motors Corp	Union	Linden	394,273	2.9
8	12	Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	376,067	2.7
9	10	National Can Company	Middlesex	Piscataway Twp	293,353	2.1
10	7	Peerless Tube Company	Essex	Bloomfield	268,160	2.0
					6,067,278	44.2

Footnotes:

1. Includes all quantities reported emitted to the air, discharged to surface waters and ground water, and released to the land at the facility.
2. Reported quantities for ammonia and sulfuric acid were excluded from summaries in Tables 6 through 17.
3. Chemical Abstracts Service Registry Number; compound categories do not have CAS numbers.
4. Includes o-xylene (CAS# 95-47-6) and xylene (mixed isomers) (CAS# 1330-20-7).

NC A newly reportable chemical for 1994; was not reportable for 1993.

NR No Report, i.e. the facility did not report in 1993.

Table 12. 1994 Release and Pollution Prevention Report

Discharges to Publicly Owned Treatment Works[1] (reported in pounds)[2]

Top 10 Chemicals Discharged in the Largest Quantities

Rank 94	Rank 93	CAS #[3]	Chemical Name	Pounds per Year	% of Total
1	1	67-56-1	Methanol	18,797,727	76.5
2	3	107-21-1	Ethylene glycol	1,987,527	8.1
3	2		Glycol ethers	1,394,039	5.7
4	4	108-95-2	Phenol	395,626	1.6
5	11	6484-52-2	Ammonium nitrate (solution)	244,537	1.0
6	6	71-36-3	n-Butyl alcohol	195,834	0.8
7	5	95-63-6	1,2,4-Trimethylbenzene	168,826	0.7
8	9	7664-38-2	Phosphoric acid	141,298	0.6
9	8	7697-37-2	Nitric acid	139,760	0.6
10	7	75-09-2	Dichloromethane	138,422	0.5
				23,603,596	96.1

Top 10 Reported POTW Discharges of a Single Chemical

Rank 94	Rank 93	Facility Name	County	City	Chemical	Pounds per Year
1	2	Cookson Pigments	Essex	Newark	Methanol	3,338,439
2	1	Sun Chemical Corp	Essex	Newark	Methanol	3,000,000
3	3	Degussa Corp Metz Division	Middlesex	South Plainfield	Methanol	2,188,609
4	4	Penick Corporation	Essex	Newark	Methanol	1,912,143
5	5	Merck Co Inc	Union	Rahway	Methanol	1,528,718
6	6	Hoffmann La Roche Inc	Essex	Nutley	Methanol	1,525,700
7	8	Aqualon	Middlesex	Sayreville	Ethylene glycol	1,286,333
8	9	Aqualon	Middlesex	Sayreville	Glycol ethers	1,187,384
9	15	Troy Chemical Corp Inc	Essex	Newark	Methanol	1,128,000
10	7	Pfister Chemical Inc	Bergen	Ridgefield	Methanol	1,001,582

Top 10 Facilities for Total POTW Discharges

Rank 94	Rank 93	Facility Name	County	City	Pounds per Year	% of Total
1	5	Cookson Pigments	Essex	Newark	3,388,162	13.8
2	1	Sun Chemical Corp	Essex	Newark	3,000,000	12.2
3	2	Aqualon	Middlesex	Sayreville	2,537,753	10.4
4	7	Degussa Corp Metz Division	Middlesex	South Plainfield	2,189,729	8.9
5	18	Penick Corporation	Essex	Newark	1,912,143	7.8
6	4	Merck Co Inc	Union	Rahway	1,797,018	7.3
7	3	Hoffmann La Roche Inc	Essex	Nutley	1,598,172	6.5
8	13	Troy Chemical Corp Inc	Essex	Newark	1,129,313	4.6
9	9	Pfister Chemical Inc	Bergen	Ridgefield	1,031,993	4.2
10	6	Kalama Chemical	Bergen	Garfield	737,839	3.0
					19,322,122	78.7

Footnotes:

1. POTW means publicly owned treatment works, including public sewage or municipal sewage treatment plants.
2. Reported quantities for ammonia and sulfuric acid were excluded from summaries in Tables 6 through 17.
3. Chemical Abstracts Service Registry Number; compound categories do not have CAS numbers.

Table 13. 1994 Release and Pollution Prevention Report

Off-Site Transfers for Recycling (reported in pounds)[1]

Top 10 Chemicals Transferred in the Largest Quantities (for Off-Site Recycling)

Rank 94	Rank 93	CAS #[2]	Chemical Name	Pounds per Year	% of Total
1	1		Copper and compounds[3]	12,704,950	26.1
2	6		Lead and compounds[4]	11,596,326	23.8
3	2		Zinc and compounds[5]	10,028,288	20.6
4	3	75-09-2	Dichloromethane	4,093,169	8.4
5	5	95-50-1	1,2-Dichlorobenzene	1,898,570	3.9
6	11		Manganese and compounds[6]	1,179,331	2.4
7	13	108-10-1	Methyl isobutyl ketone	1,020,966	2.1
8	14	76-13-1	Freon 113	901,246	1.9
9	9	108-88-3	Toluene	793,082	1.6
10	15		Chromium and compounds[7]	649,639	1.4
				44,865,567	92.1

Top 10 Reported Off-Site Transfers for Recycling of a Single Chemical

Rank 94	Rank 93	Facility Name	County	City	Chemical	Pounds per Year
1	1	General Motors Corp	Middlesex	New Brunswick	Lead compounds	9,072,000
2	3	Co Steel Raritan	Middlesex	Perth Amboy	Zinc (fume or dust)	6,935,460
3	2	Circuit Foil USA Inc	Burlington	Bordentown Twp	Copper compounds	3,070,212
4	4	Biocraft Laboratories Inc	Bergen	Waldwick	Dichloromethane	2,941,037
5	7	Phelps Dodge Specialty Copper	Union	Elizabeth	Copper	2,712,000
6	5	New Jersey Steel Corporation	Middlesex	Sayreville	Zinc (fume or dust)	2,618,476
7	8	The Okonite Co Inc	Middlesex	North Brunswick Twp	Copper	2,206,048
8	9	Du Pont Chambers Works	Salem	Pennsville Twp	1,2-Dichlorobenzene	1,898,570
9	11	The Okonite Co Inc	Passaic	Paterson	Copper	1,732,034
10	*[8]	Ullrich Copper Inc	Union	Kenilworth	Copper	960,000

Top 10 Facilities for Total Off-Site Transfers for Recycling

Rank 94	Rank 93	Facility Name	County	City	Pounds per Year	% of Total
1	1	General Motors Corp	Middlesex	New Brunswick	9,130,000	18.8
2	4	Co Steel Raritan	Middlesex	Perth Amboy	7,672,681	15.8
3	8	Du Pont Chambers Works	Salem	Pennsville Twp	3,610,430	7.4
4	5	New Jersey Steel Corporation	Middlesex	Sayreville	3,397,418	7.0
5	2	Circuit Foil USA Inc	Burlington	Bordentown Twp	3,291,977	6.8
6	7	Biocraft Laboratories Inc	Bergen	Waldwick	2,941,037	6.0
7	9	Phelps Dodge Specialty Copper	Union	Elizabeth	2,712,000	5.6
8	10	The Okonite Co Inc	Middlesex	North Brunswick Twp	2,206,048	4.5
9	11	The Okonite Co Inc	Passaic	Paterson	1,899,624	3.9
10	3	Merck Co Inc	Union	Rahway	1,067,868	2.2
					37,929,083	78.0

Footnotes:

1. Reported quantities for ammonia and sulfuric acid were excluded from summaries in Tables 6 through 17.
2. Chemical Abstracts Service Registry Number; compound categories do not have CAS numbers.
3. Includes both copper (CAS# 7440-50-8) and "copper compounds."
4. Includes both lead (CAS# 7439-92-1) and "lead compounds."
5. Includes both zinc (CAS# 7440-66-6) and "zinc compounds."
6. Includes both manganese (CAS# 7439-96-5) and "manganese compounds."
7. Includes both chromium (CAS# 7440-47-3) and "chromium compounds."
8. One of 1,984 chemical records (of the total of 2,363) that had no off-site transfers for recycling reported for 1993.

Table 14. 1994 Release and Pollution Prevention Report

Off-Site Transfers for Energy Recovery (reported in pounds)[1]

Top 10 Chemicals Transferred in the Largest Quantities (for Energy Recovery)

Rank 94	Rank 93	CAS #[2]	Chemical Name	Pounds per Year	% of Total
1	1	67-56-1	Methanol	7,479,723	32.6
2	2	108-88-3	Toluene	4,582,942	20.0
3	3		Xylenes[3]	3,934,738	17.1
4	4	78-93-3	Methyl ethyl ketone	2,213,403	9.6
5	5	108-10-1	Methyl isobutyl ketone	642,438	2.8
6	6	100-41-4	Ethylbenzene	622,326	2.7
7	8	71-36-3	n-Butyl alcohol	455,232	2.0
8	11	78-92-2	sec-Butyl alcohol	425,866	1.9
9	9	100-44-7	Benzyl chloride	409,292	1.8
10	10		Glycol ethers	342,700	1.5
				21,108,660	91.9

Top 10 Reported Off-Site Transfers for Energy Recovery of a Single Chemical

Rank 94	Rank 93	Facility Name	County	City	Chemical	Pounds per Year
1	1	Internat'l Flavors & Fragrances	Monmouth	Union Beach	Toluene	1,939,281
2	2	Merck Co Inc	Union	Rahway	Methanol	1,744,856
3	24	Hatco Corporation	Middlesex	Woodbridge Twp	Methanol	1,097,222
4	3	Internat'l Flavors & Fragrances	Monmouth	Union Beach	Methyl ethyl ketone	951,044
5	4	CPS Chemical Co Inc	Middlesex	Old Bridge Twp	Methanol	930,800
6	5	Internat'l Flavors & Fragrances	Monmouth	Union Beach	Methanol	912,130
7	*[4]	Stepan Company Maywood Div	Bergen	Maywood	Methanol	813,400
8	7	Permacel A Nitto Denko Company	Middlesex	North Brunswick Twp	Toluene	772,427
9	6	Mobil Oil Corporation	Middlesex	Edison Twp	Xylene (mixed isomers)	675,210
10	8	Internat'l Flavors & Fragrances	Monmouth	Union Beach	Xylene (mixed isomers)	586,862

Top 10 Facilities for Total Off-Site Transfers for Energy Recovery

Rank 94	Rank 93	Facility Name	County	City	Pounds per Year	% of Total
1	1	Internat'l Flavors & Fragrances	Monmouth	Union Beach	4,975,137	21.7
2	2	Merck Co Inc	Union	Rahway	2,270,301	9.9
3	21	Hatco Corporation	Middlesex	Woodbridge Twp	1,111,324	4.8
4	3	Mobil Oil Corporation	Middlesex	Edison Twp	1,036,745	4.5
5	4	CPS Chemical Co Inc	Middlesex	Old Bridge Twp	930,800	4.1
6	6	Permacel A Nitto Denko Company	Middlesex	North Brunswick Twp	829,984	3.6
7	*[5]	Stepan Company Maywood Div	Bergen	Maywood	813,400	3.5
8	5	Schering Corporation	Union	Union Twp	694,711	3.0
9	9	Monsanto Company	Gloucester	Logan Twp	664,513	2.9
10	*[6]	Con Lux Coatings Inc	Middlesex	Edison Twp	633,383	2.8
					13,960,298	60.8

Footnotes:

1. Reported quantities for ammonia and sulfuric acid were excluded from summaries in Tables 6 through 17.
2. Chemical Abstracts Service Registry Number; compound categories do not have CAS numbers.
3. Includes o-xylene (CAS# 95-47-6) and xylene (mixed isomers) (CAS# 1330-20-7).
4. One of 1,935 chemical records (of the total of 2,363) that had no off-site transfers for energy recovery reported for 1993.
5. One of 504 facilities (of the total of 632) that reported no off-site transfers for energy recovery reported for 1993.

Table 15. 1994 Release and Pollution Prevention Report

Off-Site Transfers for Treatment (reported in pounds)[1]

Top 10 Chemicals Transferred in the Largest Quantities (for Treatment)

Rank 94	Rank 93	CAS #[2]	Chemical Name	Pounds per Year	% of Total
1	1	67-56-1	Methanol	3,193,867	32.3
2	7	95-50-1	1,2-Dichlorobenzene	1,284,422	13.0
3	2	108-88-3	Toluene	917,493	9.3
4	4		Lead and compounds[3]	758,634	7.7
5	19		Glycol ethers	594,015	6.0
6	3	78-93-3	Methyl ethyl ketone	496,703	5.0
7	6		Xylenes[4]	382,936	3.9
8	5	7697-37-2	Nitric acid	240,766	2.4
9	23	108-10-1	Methyl isobutyl ketone	175,332	1.8
10	13	7647-01-0	Hydrochloric acid	131,517	1.3
				8,175,685	82.7

Top 10 Reported Off-Site Transfers for Treatment of a Single Chemical

Rank 94	Rank 93	Facility Name	County	City	Chemical	Pounds per Year
1	1	Hoffmann La Roche Inc	Essex	Nutley	Methanol	2,738,213
2	8	Du Pont Chambers Works	Salem	Pennsville Twp	1,2-Dichlorobenzene	1,284,422
3	3	Du Pont Chambers Works	Salem	Pennsville Twp	Lead compounds	692,836
4	*[5]	Hoffmann La Roche Inc	Essex	Nutley	Glycol ethers	491,824
5	6	Hoffmann La Roche Inc	Essex	Nutley	Toluene	291,630
6	*[5]	Du Pont Chambers Works	Salem	Pennsville Twp	Xylene (mixed isomers)	161,820
7	17	Du Pont Chambers Works	Salem	Pennsville Twp	Methanol	157,744
8	*[5]	Crown Roll Leaf Inc	Passaic	Paterson	Methyl ethyl ketone	147,766
9	13	Swepco Tube Corporation	Passaic	Clifton	Nitric acid	146,692
10	*[5]	Akzo Coatings	Somerset	Franklin Twp	Methyl ethyl ketone	100,680

Top 10 Facilities for Total Off-Site Transfers for Treatment

Rank 94	Rank 93	Facility Name	County	City	Pounds per Year	% of Total
1	1	Hoffmann La Roche Inc	Essex	Nutley	3,633,615	36.8
2	2	Du Pont Chambers Works	Salem	Pennsville Twp	2,825,194	28.6
3	10	Swepco Tube Corporation	Passaic	Clifton	235,899	2.4
4	13	Cardolite Corporation	Essex	Newark	170,500	1.7
5	41	Du Pont Parlin	Middlesex	Sayreville	165,513	1.7
6	*[6]	Crown Roll Leaf Inc	Passaic	Paterson	164,196	1.6
7	16	Pan Chemical Corp	Passaic	Hawthorne	136,430	1.4
8	9	Elan Chemical Co Inc	Essex	Newark	125,390	1.3
9	*[6]	Akzo Coatings	Somerset	Franklin Twp	116,875	1.2
10	21	Ames Rubber Corp	Sussex	Wantage Twp	111,987	1.1
					7,685,599	77.8

Footnotes:

1. Reported quantities for ammonia and sulfuric acid were excluded from summaries in Tables 6 through 17.
2. Chemical Abstracts Service Registry Number; compound categories do not have CAS numbers.
3. Includes both lead (CAS# 7439-92-1) and "lead compounds."
4. Includes o-xylene (CAS# 95-47-6) and xylene (mixed isomers) (CAS# 1330-20-7).
5. One of 1,787 chemical records (of the total of 2,363) that had no off-site transfers for treatment reported for 1993.
6. One of 443 facilities (of the total of 632) that reported no off-site transfers for treatment reported for 1993.

Table 16. 1994 Release and Pollution Prevention Report

Off-Site Transfers for Disposal (reported in pounds)[1]

Top 10 Chemicals Transferred in the Largest Quantities (for Disposal)

Rank 94	Rank 93	CAS #[2]	Chemical Name	Pounds per Year	% of Total
1	1	108-88-3	Toluene	2,136,786	51.8
2	2		Zinc and compounds[3]	887,748	21.5
3	6		Lead and compounds[4]	275,694	6.7
4	4		Copper and compounds[5]	127,252	3.1
5	5	67-56-1	Methanol	88,311	2.2
6	29		Manganese and compounds[6]	79,598	1.9
7	3		Antimony compounds	73,419	1.8
8	12	117-81-7	Di(2-ethylhexyl) phthalate	59,469	1.4
9	15	1330-20-7	Xylene (mixed isomers)	49,438	1.2
10	*[7]	127-18-4	Tetrachloroethylene	46,241	1.1
				3,823,956	92.7

Top 10 Reported Off-Site Transfers for Disposal of a Single Chemical

Rank 94	Rank 93	Facility Name	County	City	Chemical	Pounds per Year
1	NR	ISP Van Dyk, Inc	Essex	Belleville	Toluene	2,093,132
2	5	Madison Industries	Middlesex	Old Bridge Twp	Zinc compounds	469,000
3	7	Sybron Chemicals Inc	Burlington	Pemberton Twp	Zinc compounds	171,000
4	12	Madison Industries	Middlesex	Old Bridge Twp	Lead compounds	133,400
5	NR	Isp Van Dyk, Inc	Essex	Belleville	Methanol	87,021
6	11	Old Bridge Chemicals Inc	Middlesex	Old Bridge Twp	Copper compounds	86,470
7	*[8]	Arrow Group Industries Corp	Passaic	Wanaque	Zinc compounds	67,151
8	21	Mannington Mills Inc	Salem	Mannington Twp	Di(2-ethylhexyl) phthalate	52,381
9	15	Exxon Chemical Company	Union	Linden	Zinc compounds	50,096
10	*[8]	Chase Laboratories Inc	Essex	Newark	Tetrachloroethylene	46,241

Top 10 Facilities for Total Off-Site Transfers for Disposal

Rank 94	Rank 93	Facility Name	County	City	Pounds per Year	% of Total
1	NR	Isp Van Dyk, Inc	Essex	Belleville	2,180,153	52.9
2	5	Madison Industries	Middlesex	Old Bridge Twp	602,400	14.6
3	6	Sybron Chemicals Inc	Burlington	Pemberton Twp	173,473	4.2
4	11	Old Bridge Chemicals Inc	Middlesex	Old Bridge Twp	103,763	2.5
5	*[9]	Arrow Group Industries Corp	Passaic	Wanaque	67,342	1.6
6	22	Mannington Mills Inc	Salem	Mannington Twp	52,715	1.3
7	13	Exxon Chemical Company	Union	Linden	51,336	1.3
8	18	Cookson Pigments	Essex	Newark	51,331	1.3
9	85	Bayway Refining Co	Union	Linden	50,214	1.2
10	*[9]	Chase Laboratories Inc	Essex	Newark	46,241	1.1
					3,378,968	82.0

Footnotes:

1. Reported quantities for ammonia and sulfuric acid were excluded from summaries in Tables 6 through 17.
2. Chemical Abstracts Service Registry Number; compound categories do not have CAS numbers.
3. Includes both zinc (CAS# 7440-66-6) and "zinc compounds."
4. Includes both lead (CAS# 7439-92-1) and "lead compounds."
5. Includes both copper (CAS# 7440-50-8) and "copper compounds."
6. Includes both manganese (CAS# 7439-96-5) and "manganese compounds."
7. One of 101 chemicals (of the total of 188) that had no off-site transfers for disposal reported for 1993.
8. One of 2,001 chemical records (of the total of 2,363) that had no off-site transfers for disposal reported for 1993.
9. One of 494 facilities (of the total of 632) that reported no off-site transfers for disposal reported for 1993.

NR No Report, i.e. the facility did not report in 1993.

Table 17. 1994 Release and Pollution Prevention Report

Total Off-Site Transfers[1] (reported in pounds)[2]

Top 10 Chemicals Transferred Off-Site in the Largest Quantities

Rank 94	Rank 93	CAS #[3]	Chemical Name	Pounds per Year	% of Total
1	1	67-56-1	Methanol	30,028,376	27.2
2	2		Copper and compounds[4]	12,927,686	11.7
3	8		Lead and compounds[5]	12,669,780	11.5
4	4		Zinc and compounds[6]	11 029,634	10.0
5	3	108-88-3	Toluene	8,549,040	7.7
6	6		Xylenes[7]	4,989,979	4.5
7	5	75-09-2	Dichloromethane	4,553,179	4.1
8	9	95-50-1	1,2-Dichlorobenzene	3,305,761	3.0
9	7	78-93-3	Methyl ethyl ketone	2,844,154	2.6
10	10		Glycol ethers	2,416,812	2.2
				93,514,403	84.5

Top 10 Reported Total Off-Site Transfers of a Single Chemical

Rank 94	Rank 93	Facility Name	County	City	Chemical	Pounds per Year
1	1	General Motors Corp	Middlesex	New Brunswick	Lead compounds	9,086,534
2	5	Co Steel Raritan	Middlesex	Perth Amboy	Zinc (fume or dust)	6,935,460
3	6	Hoffmann La Roche Inc	Essex	Nutley	Methanol	4,263,913
4	14	Cookson Pigments	Essex	Newark	Methanol	3,338,439
5	3	Merck Co Inc	Union	Rahway	Methanol	3,288,580
6	11	Du Pont Chambers Works	Salem	Pennsville Twp	1,2-dichlorobenzene	3,183,885
7	2	Circuit Foil USA Inc	Burlington	Bordentown Twp	Copper compounds	3,074,096
8	4	Sun Chemical Corp	Essex	Newark	Methanol	3,000,000
9	7	Biocraft Laboratories Inc	Bergen	Waldwick	Dichloromethane	2,941,037
10	9	Phelps Dodge Specialty Copper	Union	Elizabeth	Copper	2,719,500

Top 10 Facilities for Total Off-Site Transfers

Rank 94	Rank 93	Facility Name	County	City	Pounds per Year	% of Total
1	1	General Motors Corp	Middlesex	New Brunswick	9,144,534	8.3
2	8	Co Steel Raritan	Middlesex	Perth Amboy	7,672,681	6.9
3	6	Du Pont Chambers Works	Salem	Pennsville Twp	6,464,496	5.8
4	5	Hoffmann La Roche Inc	Essex	Nutley	5,361,342	4.8
5	2	Merck Co Inc	Union	Rahway	5,152,652	4.7
6	4	Internat'l Flavors & Fragrances	Monmouth	Union Beach	5,094,563	4.6
7	15	Cookson Pigments	Essex	Newark	3,764,694	3.4
8	9	New Jersey Steel Corporation	Middlesex	Sayreville	3,397,418	3.1
9	3	Circuit Foil USA Inc	Burlington	Bordentown Twp	3,298,440	3.0
10	7	Sun Chemical	Essex	Newark	3,000,000	2.7
					52,350,820	47.3

Footnotes:

1. Total Off-Site Transfers includes discharges to publicly owned treatment works and all other transfers to off-site locations for the purposes of recycling, energy recovery, treatment and disposal.
2. Reported quantities for ammonia and sulfuric acid were excluded from summaries in Tables 6 through 17.
3. Chemical Abstracts Service Registry Number; compound categories do not have CAS numbers.
4. Includes both copper (CAS# 7440-50-8) and "copper compounds."
5. Includes both lead (CAS# 7439-92-1) and "lead compounds."
6. Includes both zinc (CAS# 7440-66-6) and "zinc compounds."
7. Includes o-xylene (CAS# 95-47-6) and xylene (mixed isomers) (CAS# 1330-20-7).

Materials Accounting

The concept underlying New Jersey's release reporting program is a simplified chemical mass balance approach that accounts, to the greatest extent possible, for all input and output quantities of each reported toxic chemical . The input quantities should approximately equal the output quantities of the reported toxic chemicals, using the chemical throughput data in combination with the data reported for on-site and off-site waste management practices, including environmental release and off-site transfer data. Figure 8, the New Jersey materials accounting worksheet, shows the data elements that are factored into the materials accounting equation.

In order to assess general data quality, the throughput data, as reported on the Release and Pollution Prevention Report (DEQ-114), are evaluated as facility-level chemical input and output balances. The input component includes: the starting inventory of the toxic chemical for the year, the quantity produced on site and the quantity brought on site. The output component includes: the quantity consumed (chemically reacted in process) on site, the quantity shipped off site as (or in) product, the quantity destroyed through on-site treatment, the quantity destroyed through on-site energy recovery, the ending inventory, and all on-site environmental releases and off-site transfers for further management.

Table 18 presents, alphabetically by chemical name, a summary of the throughput data including environmental releases and off-site transfers for 193 chemicals, compound categories and "mixture" category reported for 1994. New Jersey facilities are allowed to protect sensitive, confidential business information regarding chemical throughput and production data. Six facilities claimed trade secrecy for 36 reported chemicals. The throughput data from these reports are not included in the summaries that follow in this section.

Excluding the trade secret claims, 653 facilities reported on 2,434 DEQ-114s that more than 7 billion pounds of the reported chemicals were manufactured and more than 8.7 billion pounds were brought on site in 1994. These same facilities reported that nearly 3.2 billion pounds of chemicals were consumed in process and almost 11.8 billion pounds were shipped off site as (or in) product. These facilities also reported that during calendar year 1994, nearly 152 million pounds were destroyed through on-site treatment, more than 228 million pounds were destroyed through on-site energy recovery, nearly 153 million pounds were transferred off-site for further management, and approximately 14.5 million pounds of environmental releases occurred at the facilities. Additionally, the facilities reported that more than 14 million pounds of input chemicals were recycled (out of process) on site and reused.

From the reported data for 1994, total input and output quantities were calculated. Using these two calculated quantities, an assessment was made of the balance, or closure, achieved in the materials accounting process. The resultant discrepancies in materials accounting were then addressed as either a quantitative difference or a percent error. Department staff contacted facilities that reported large quantitative errors to notify them of the observed discrepancies. These contacts proved to be beneficial in at least three different ways: 1) facility personnel received direct technical guidance from department staff; 2) revised reports may have then been submitted, improving the overall quality of the database; and 3) NJDEP staff were alerted to misunderstandings in the instructions and in the completion of the reporting form.

The data quality review process and some of the possible (i.e., the known) sources of reporting errors are addressed on the following pages. Figure 11 presents the distribution of observed materials accounting discrepancies in the 1994 data. Five facilities submitted reports for 15 chemicals that had a difference of more than 1,000,000 pounds between input and output quantities; 12 of the reports where the input exceeded the output by more than 1,000,000 pounds and three where the output exceeded the input. The department annually investigates such discrepancies to gain an understanding of the causative factors. It is encouraging that the 1994 data indicate an improvement in materials accounting over the 1993 data. The percentage of chemical records with zero quantitative discrepancy increased for 1994, while the total number of discrepancy reports at the extremes declined.

Table 19 presents the top 10 toxic chemical records by the largest quantitative difference for both a positive value and a negative value. As noted, the difference is simply the input minus the output. Therefore, a positive value means that a larger quantity is accounted for on the input side of the equation; a negative value means that a larger quantity is accounted for on the output side of the equation. The department has taken steps to notify industries of these observed differences. While looking at the large quantitative differences, it is important to note the value of the percent error. A review of Table 19 shows that for eight of the 20 chemical records listed, the quantitative difference is less than two percent of the total.

Large percentage discrepancies are also observed in the database and may be just as significant as large quantitative discrepancies. The equations for determining the percent error are:

$$\frac{(\text{Input} - \text{Output}) \times 100\%}{\text{Input}}$$ where Input is greater than Output, or

$$\frac{(\text{Input} - \text{Output}) \times 100\%}{\text{Output}}$$ where Output is greater than Input.

The sign of the error value (+ or -) resulting from the equations indicates the source of the excess in the materials accounting process. A "positive" percent error occurs when the input exceeds the output; a "negative" percent error occurs when the output exceeds the input. Table 20 presents the top 10 toxic chemical records by the largest percentage error for both a positive value and a negative value. A review of Table 20 indicates that possibly some of these chemicals did not exceed the 10,000 pound manufacture, process, or otherwise use threshold and should not have been reported at all (compare input and output quantities).

The materials accounting worksheet (Figure 10), included with the DEQ-114 reporting package, was developed to minimize the types of errors noted in Tables 19 and 20. The department has continued to conduct outreach efforts to industry that encourage the use of the worksheet as a preliminary check, at the very least, of reported quantities on the Release and Pollution Prevention Report.

Table 21 summarizes, by county, the throughput data, the calculated inputs and outputs, and the materials accounting differences. Table 22 presents a detailed summary, by standard industrial classification, of the throughput data, the calculated inputs and outputs and the materials accounting differences.

Data Quality Assurance and Possible Sources of Error

As discussed above, the Release and Pollution Prevention Reports are subjected to data quality review. Preliminary summaries and reviews of the database required a significant amount of manual effort, comparing the database with the actual forms. Additionally, NJDEP staff provided technical assistance through phone conversations with facility personnel.

Based on this assistance and discussions with facility environmental managers, it is evident that historically there have been some misunderstandings or misinterpretations of the intent and nature of the reportable data. For example, the distinction between "consumed on site" and "shipped off site as (or in) product" was not clearly understood by the regulated community. Consumed on site means that a chemical change occurs, i.e., the toxic chemical's molecular structure is altered in the process resulting in the formation of a new substance. A toxic chemical may be shipped off site as (or in) product as a result of the manufacture or processing of the reported toxic chemical, or another chemical, where it remains primarily in the product or in a mixture with another chemical or chemicals. Recognizing that there have been, and continue to be, misunderstandings about the various reportable data elements, the DEQ-114 instructions contain a worksheet for verification of the materials accounting data (see Figure 10).

The most significant misreporting occurs for the metals and their compound categories. When reporting on the metal compound categories, *only the quantity of the parent metal is to be reported*. For throughput reporting, the metals are generally not reportable as "produced on site" or as "consumed on site." An exception to this would be those facilities which are engaged in the primary smelting and metals refining industries (SICs 3331 and 3339, respectively) that are actually extracting the metals from ores, etc., in their processes. Another exception is in the reporting of those metals that have a "fume or dust" qualifier (specifically aluminum, vanadium, and zinc) where the fume or dust is either produced or consumed in the process. Table 18, the summary of throughput data by chemical, demonstrates the cases where metals are reported as produced, consumed and even destroyed through treatment or destroyed through energy recovery either at the reporting facilities or through off-site transfers.

A new source of error with respect to the 1994 data is found in the reporting modifications implemented by the USEPA for ammonia and sulfuric acid. As stated earlier in this report, the USEPA changed the reporting requirements for ammonia by: 1) deleting ammonium sulfate (CAS# 7783-20-2) from the list of reportable chemicals; and 2) changing ammonia (CAS# 7664-41-7) to "include anhydrous [gaseous] ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10 percent of total aqueous ammonia is reportable under this listing." This new qualification would include 10% of the total aqueous ammonia from ammonium sulfate as well as from other water dissociable ammonium salts (as stated above). Changes to the federal toxic chemical list under Section 313 of EPCRA are automatically incorporated into the reporting requirements for the Release and Pollution Prevention Report under state requirements. For facilities where chemical processes incorporate and/or generate both anhydrous ammonia (where 100% is accountable) and aqueous forms (where 10% of total aqueous ammonia is accountable), this reporting change for ammonia effectively invalidated the materials accounting process and the possibility of achieving a balance of inputs and outputs for many, if not most, facilities. An example based upon USEPA's "Guidance for Reporting Aqueous Ammonia"[1] follows:

Ex: In a calendar year, a facility uses 30,000 pounds of anhydrous ammonia to neutralize acids in a waste water stream. The neutralized waste stream (containing aqueous ammonia from dissociated ammonium salts) is then transferred to a POTW. The quantity to be applied toward threshold determinations is the total quantity of anhydrous ammonia used in the waste stream neutralization, or 30,000 pounds. The quantity of ammonia reported as transferred is 10 percent of the total quantity of aqueous ammonia transferred, or 3,000 pounds. Based on the modified reporting requirements, the simple materials accounting equation would be 30,000 pounds of input, 3,000 pounds of output, resulting in a 27,000 pounds materials accounting discrepancy.

In the same regulatory action, USEPA changed the reporting requirements of sulfuric acid from "solution" to "acid aerosol forms only." This qualifier would then apply only to the manufacture, process, use and release of aerosol forms of sulfuric acid. In previous years as well as in 1994, several facilities have reported large quantities of sulfuric acid transferred off site for recycling (acid regeneration). This activity is still in evidence in Table 3, though facilities would not be reporting acid aerosol forms recycled off-site under the modified reporting requirements since an aerosol form would not be captured and transferred off site.

In these actions, the USEPA provided facilities with the option to revise or even withdraw their submissions for ammonia and sulfuric acid. Facilities were not required to revise these submissions with one exception. The exception relates to a facility that submitted Form Rs for both ammonia and ammonium sulfate (solution). In these cases, USEPA required the facility to withdraw its form for ammonium sulfate (solution). Then the facility was required to revise its ammonia report to include the aqueous ammonia releases from ammonium sulfate (solution). In conjunction with any Form R revisions for these chemicals, a facility was also required to revise its throughput, environmental release, off-site transfer, and pollution prevention data, as appropriate, on its DEQ-114. As stated previously and is evidenced in the data summary tables, some facilities did so and others did not.

Another factor that may be a source of discrepancies in materials accounting is that the reporting requirements allow the rounding off of reportable quantities to two significant integers. Quantities are more likely to be rounded down, than up, thereby masking a certain quantity of the "true" value (or estimate); the larger the actual value (or estimate) is, the more significant the rounded off quantity will be. For example, consider the impact on the database, and subsequent data analyses, of rounding off 12,345 pounds versus 12,345,678 pounds. In one case, 345 pounds are excluded from reporting, in the other case 345,678 pounds are not reported. Therefore, rounding off is discouraged on the Release and Pollution Prevention Report.

It should also be noted that not all industries are primarily concerned with tracking the amount of a reportable toxic chemical within their processes or facilities, though most are able to fairly accurately quantify the environmental releases and off-site transfers of those chemicals. The petroleum refining industry is a good example of this. Crude oil, a raw material that varies in composition depending upon its geographic and geologic origins, is

1. USEPA, Office of Pollution Prevention and Toxics, Washington, DC 20460, July 1995, EPA-745-R-95-003.

"cracked," or refined, to provide a wide variety of hydrocarbon-based chemicals. Benzene, toluene and xylene are toxic chemicals that are cracked and refined from oil, and then blended with other chemicals to produce, for example, gasoline. The industry focuses more on the performance characteristics of the products than on exactly how much of any chemical was contained in or cracked from the crude. Further, physical and chemical analyses of crude oil are expensive and may require many months to complete and are, therefore, not performed on every batch of crude that a refinery receives and processes. Subsequently, the quantitative estimates for throughput data are often based on previously published analytical results of chemical composition data that may, or may not, be representative of the actual composition of the batches refined in the reporting year. That composition data identifies the chemicals contained in the crude by a range of numbers (i.e., a minimum and a maximum value), not by an exact value of the percent composition.

Considering this information along with the volume of chemical throughput reported by the petroleum industry (see data in Table 22) demonstrates the challenges to generating meaningful information from a simplified mass balance approach for some industries. It should also be noted that some industries, by the nature of their processes, indirectly derive the quantities of the chemicals tracked through their processes.

* Public Notice: Due to a data entry error, the *Cardolite Corporation* was incorrectly listed in the *Table 19, "Top Ten Chemical Records by Positive Quantitative Difference (Input exceeds Output),"* found on page 58 of The Community Right To Know Annual Report For Survey Year 1993. Cardolite Corporation should not have been included on this list.

Table 18. 1994 RPPR Throughput Data Reported by New Jersey Facilities[1]
(ordered alphabetically by chemical name; quantities reported in pounds per year)

		Inputs				Outputs →	
CAS #	Chemical Name	Starting Inventory	Produced On-Site	Brought On-Site	Recycled & Re-used On-Site	Consumed On-Site	Shipped Off-Site as (or in) Product
75-07-0	Acetaldehyde	21,410	34,310	556,557	0	526,667	21,900
75-05-8	Acetonitrile	97,670	39,000	1,833,445	38,740	7,720	1,654,839
98-86-2	Acetophenone	22,255	108,564	283,811	0	226,384	27,062
79-06-1	Acrylamide	102,274	0	1,593,247	0	1,249,746	0
79-10-7	Acrylic acid	179,590	0	5,615,695	0	2,409,433	3,176,040
107-13-1	Acrylonitrile	183,248	0	6,259,517	0	6,235,776	1,045
107-18-6	Allyl alcohol	122,360	0	125,560	0	165,811	0
107-05-1	Allyl chloride	3,996	0	52,788	0	38,220	0
7429-90-5	Aluminum (fume or dust)	299,475	66,840	1,196,946	8,817	12,095	1,006,416
1344-28-1	Aluminum oxide (fibrous forms only)	1,552	0	12,264	0	0	10,504
60-09-3	4-Aminoazobenzene	1,100	0	23,600	0	20,245	0
7664-41-7	Ammonia	28,446,521	4,302,984	99,128,667	2,647	45,717,071	43,726,426
6484-52-2	Ammonium nitrate (solution)	374,700	399,624	1,440,774	0	70,000	1,401,074
62-53-3	Aniline	451,168	135,918	3,918,471	0	3,463,933	150
90-04-0	o-Anisidine	55,444	0	242,549	0	243,896	0
120-12-7	Anthracene	131,000	322,000	2,817,000	0	0	3,144,000
7440-36-0	Antimony	4,146,592	0	16,873,749	500	0	16,375,811
	Antimony compounds	461,416	0	5,093,451	1,915	0	4,731,542
7440-38-2	Arsenic	6,700	0	68,000	0	0	67,500
	Arsenic compounds	9,436	0	27,571	236	0	26,945
1332-21-4	Asbestos (friable)	47,711	0	4,332,678	299	0	4,615,573
7440-39-3	Barium	12,688	0	117,088	0	91,354	275
	Barium compounds	442,179	331,833	2,669,502	110,706	448,610	2,176,187
98-87-3	Benzal chloride	40,024	3,742,510	0	0	52,405	3,669,148
71-43-2	Benzene	37,109,767	412,291,689	153,601,641	40,900	89,502,850	465,166,888
98-07-7	Benzoic trichloride	234	20,925	0	0	0	21,126
98-88-4	Benzoyl chloride	56,009	0	51,193	0	89,132	0
94-36-0	Benzoyl peroxide	22,834	0	273,846	0	256,158	0
100-44-7	Benzyl chloride	860,880	70,249,246	5,874,020	0	47,337,415	28,123,946
92-52-4	Biphenyl	4,968	0	54,055	0	0	34,922
103-23-1	Bis(2-ethylhexyl)adipate	277,718	103,940	1,247,589	2,000	0	1,407,410
542-88-1	Bis(chloromethyl) ether	187	25,973	0	0	25,921	0
74-83-9	Bromomethane	857	14,807	18,900	0	3,706	0
106-99-0	1,3-Butadiene	640	2,223,611	264,694	0	2,182,946	304,281
141-32-2	Butyl acrylate	2,895,886	0	39,796,545	0	29,822,963	11,936,232
71-36-3	n-Butyl alcohol	3,332,345	0	38,602,693	27,575	31,501,602	5,911,300
78-92-2	sec-Butyl alcohol	121,238	0	1,309,478	1,077,203	156,940	747,883
75-65-0	tert-Butyl alcohol	366,508	92,814	257,061	564	191,582	30,985
123-72-8	Butyraldehyde	47,380	0	405,503	0	408,751	0
569-64-2	C I Basic Green 4	0	0	40,000	0	0	39,932
989-38-8	C I Basic Red 1	1,440	0	80,400	0	79,417	0
81-88-9	C I Food Red 15	5,600	0	79,000	0	71,000	1
3118-97-6	C I Solvent Orange 7	1,500	38,285	900	0	0	38,833
97-56-3	C I Solvent Yellow 3	3,390	0	27,697	0	23,912	3,555
842-07-9	C I Solvent Yellow 14	1,100	19,896	3,600	0	0	22,096
7440-43-9	Cadmium	2,000	0	26,000	33,000	0	25,000
	Cadmium compounds	122,606	0	732,537	33,175	0	764,117
133-06-2	Captan	0	0	41,800	0	0	41,797
75-15-0	Carbon disulfide	254,048	0	2,535,310	0	2,542,250	0
56-23-5	Carbon tetrachloride	0	23,040	0	0	0	0

Footnotes: see pages 58 and 59

← Outputs

Ending Inventory	Destroyed On Site	Releases & Transfers	Total Input[2]	Total Output[3]	Difference[4]	# of Forms	Chemical Name
29,600	29,712	4,936	612,277	612,815	-538	3	Acetaldehyde
59,463	3,908	157,634	1,970,115	1,883,564	86,551	6	Acetonitrile
67,528	0	55,199	414,630	376,173	38,457	2	Acetophenone
145,653	299,700	782	1,695,521	1,695,881	-360	4	Acrylamide
198,068	5,542	16,028	5,795,285	5,805,111	-9,826	16	Acrylic acid
203,979	160	4,396	6,442,765	6,445,356	-2,591	7	Acrylonitrile
59,010	14	23,095	247,920	247,930	-10	2	Allyl alcohol
6,699	237	11,628	56,784	56,784	0	1	Allyl chloride
234,468	0	72,865	1,563,261	1,325,844	237,417	6	Aluminum (fume or dust)
3,212	0	100	13,816	13,816	0	1	Aluminum oxide (fibrous forms only)
4,455	0	0	24,700	24,700	0	1	4-Aminoazobenzene
29,370,073	3,406,176	6,161,417	131,878,172	128,381,163	3,497,009	86	Ammonia
316,300	412	429,312	2,215,098	2,217,098	-2,000	7	Ammonium nitrate (solution)
896,039	134,185	11,354	4,505,557	4,505,661	-104	10	Aniline
51,848	0	2,249	297,993	297,993	0	3	o-Anisidine
126,000	160	130	3,270,000	3,270,290	-290	1	Anthracene
4,416,126	0	70,021	21,020,341	20,861,958	158,383	6	Antimony
585,175	11,008	92,333	5,554,867	5,420,058	134,809	27	Antimony compounds
6,700	0	505	74,700	74,705	-5	1	Arsenic
9,441	0	861	37,007	37,247	-240	5	Arsenic compounds
63,883	0	527	4,380,389	4,679,983	-299,594	3	Asbestos (friable)
15,689	0	49,172	129,776	156,490	-26,714	2	Barium
415,070	191,256	288,294	3,443,514	3,519,417	-75,903	31	Barium compounds
7,357	0	53,624	3,782,534	3,782,534	0	1	Benzal chloride
46,711,010	153,354	376,885	603,003,097	601,910,987	1,092,110	11	Benzene
33	0	0	21,159	21,159	0	1	Benzoic trichloride
18,041	0	29	107,202	107,202	0	2	Benzoyl chloride
40,386	0	136	296,680	296,680	0	2	Benzoyl peroxide
1,107,669	3,426	413,924	76,984,146	76,986,380	-2,234	6	Benzyl chloride
14,679	0	9,382	59,023	58,983	40	3	Biphenyl
174,698	5,899	32,484	1,629,247	1,620,491	8,756	10	Bis(2-ethylhexyl)adipate
46	135	58	26,160	26,160	0	1	Bis(chloromethyl) ether
800	15,259	16,070	34,564	35,835	-1,271	2	Bromomethane
1,148	13,946	754	2,488,945	*2,503,075*	*-14,130*	4	*1,3-butadiene*
923,739	*400*	14,718	42,692,431	42,698,052	-5,621	12	Butyl acrylate
2,033,018	1,018,730	1,419,842	41,935,038	41,884,492	50,546	52	n-Butyl alcohol
163,050	2,795	384,279	1,430,716	1,454,947	-24,231	4	sec-Butyl alcohol
266,908	0	226,907	716,383	716,382	1	4	tert-Butyl alcohol
42,520	0	257	452,883	451,528	1,355	1	Butyraldehyde
0	0	68	40,000	40,000	0	1	C I basic green 4
2,391	0	32	81,840	81,840	0	1	C I Basic Red 1
14,000	0	0	84,600	85,001	-401	1	C I Food Red 15
700	0	1,332	40,685	40,865	-180	2	C I Solvent Orange 7
3,620	0	0	31,087	31,087	0	1	C I Solvent Yellow 3
2,500	0	0	24,596	24,596	0	1	C I Solvent Yellow 14
2,000	0	248	28,000	27,248	752	1	Cadmium
81,202	400	3,366	855,143	849,085	6,058	10	Cadmium compounds
0	0	3	41,800	41,800	0	1	Captan
200,372	2,050	44,416	2,789,358	2,789,088	270	2	Carbon disulfide
0	0	23,040	23,040	23,040	0	1	Carbon tetrachloride

Footnotes: see pages 58 and 59

Table 18. 1994 RPPR Throughput Data Reported by New Jersey Facilities,[1] continued
(ordered alphabetically by chemical name; quantities reported in pounds per year)

		Inputs				Outputs →	
CAS #	Chemical Name	Starting Inventory	Produced On-Site	Brought On-Site	Recycled & Re-used On-Site	Consumed On-Site	Shipped Off-Site as (or in) Product
120-80-9	Catechol	9,295	41,047	17,875	0	16,720	0
	Chlorinated phenols	21,928	0	90,525	0	0	100,392
7782-50-5	Chlorine	3,795,445	8,000	175,421,978	0	161,040,471	11,445,112
79-11-8	Chloroacetic acid	124,909	0	2,024,807	0	2,037,277	0
75-68-3	1-Chloro-1,1-difluoroethane (HCFC-142b)	687,781	32,481,000	4,446	0	19,525,468	13,063,000
75-45-6	Chlorodifluoromethane (HCFC-22)	2,775,008	0	24,167,531	0	15,022,523	6,565,487
75-00-3	Chloroethane	7,892	75,689	1,212,205	0	1,130,741	0
67-66-3	Chloroform	776,048	26,430	527,465	0	279,691	118,761
74-87-3	Chloromethane	171,770	91,834	3,956,345	0	4,048,820	0
107-30-2	Chloromethyl methyl ether	1,322	1,194,772	0	0	1,184,451	0
2837-89-0	2-Chloro-1,1,2,2-tetra-fluoroethane (HCFC-124)	1,063,914	19	3,883,917	0	3,621,837	0
7440-47-3	Chromium	2,473,345	40,780	10,230,137	471,080	43,237	9,323,675
	Chromium compounds	1,193,747	0	8,233,055	483	0	7,273,887
7440-48-4	Cobalt	1,552,469	0	3,176,345	70,200	4,376	2,559,648
	Cobalt compounds	75,439	0	720,615	106	0	661,749
7440-50-8	Copper	19,034,963	40,780	295,173,464	869,900	2,468,679	280,226,559
	Copper compounds	2,252,705	3,583,002	24,243,230	129,709	229,541	23,477,559
8001-58-9	Creosote	583,583	0	7,746,120	0	0	7,458,424
95-48-7	o-Cresol	10,638	0	12,000	0	0	22,624
106-44-5	p-Cresol	103,222	0	5,922,660	0	5,871,566	0
1319-77-3	Cresol (mixed isomers)	477,827	0	2,429,974	0	36,600	2,632,320
98-82-8	Cumene	15,651,693	161,636,631	67,378,814	300	37,476,223	168,834,821
80-15-9	Cumene hydroperoxide	392,820	8,771,235	0	0	7,395,554	1,291,801
	Cyanide compounds	12,960	0	216,575	0	148,475	42,020
110-82-7	Cyclohexane	16,445,522	193,833,634	163,091,206	268,000	82,017,920	266,847,463
1163-19-5	Decabromodiphenyl oxide	85,141	0	2,094,903	1,365	0	1,937,110
101-80-4	4,4'-Diaminodiphenyl ether	408,260	1,080,482	63,586	11,210	49,510	1,067,428
95-80-7	2,4-Diaminotoluene	4,664	0	97,774	0	94,298	0
106-93-4	1,2-Dibromoethane	729,220	0	29,877	0	0	29,877
84-74-2	Dibutyl phthalate	90,807	0	1,159,918	36,099	33,841	1,077,277
95-50-1	1,2-Dichlorobenzene	252,055	0	9,691,145	66,540	6,166,080	90,177
106-46-7	1,4-Dichlorobenzene	177,000	0	2,661,309	0	0	2,675,869
91-94-1	3,3'-Dichlorobenzidine	24,400	0	141,000	0	155,200	0
75-71-8	Dichlorodifluoromethane (CFC-12)	1,532,083	0	12,583,017	0	0	4,658,475
107-06-2	1,2-Dichloroethane	38,869	0	48,126	0	0	0
1717-00-6	1,1-Dichloro-1-fluoroethane (HCFC-141b)	194,164	0	4,051,060	0	0	3,951,628
75-09-2	Dichloromethane	988,576	0	9,644,999	5,532	29,615	4,226,598
120-83-2	2,4-Dichlorophenol	2,403	0	131,485	0	87,395	0
78-87-5	1,2-Dichloropropane	75,237	0	1,917,900	0	1,719,599	0
76-14-2	Dichlorotetrafluoroethane (CFC-114)	1,855,146	838	6,866,620	0	6,462,000	467,628
306-83-2	2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123)	20,683	4,226	9,436	0	0	0
111-42-2	Diethanolamine	469,370	0	9,361,809	6	8,920,832	345,359
117-81-7	Di(2-ethylhexyl) phthalate	1,329,030	0	40,949,660	301,718	1,624,139	38,897,621
84-66-2	Diethyl phthalate	606,331	0	4,818,410	186,945	0	4,808,471
64-67-5	Diethyl sulfate	126,275	0	1,347,730	0	1,347,091	0
119-90-4	3,3'-Dimethoxybenzidine	49,000	0	25,000	0	26,417	0
124-40-3	Dimethylamine	4,068	0	21,920	0	24,429	0
121-69-7	N,N-Dimethylaniline	94,449	0	1,664,023	0	132,357	1,449,293
131-11-3	Dimethyl phthalate	11,166	0	29,399	8,873	0	36,714
77-78-1	Dimethyl sulfate	120,823	0	771,461	0	737,298	0

Footnotes: see pages 58 and 59

← Outputs

Ending Inventory	Destroyed On Site	Releases & Transfers	Total Input[2]	Total Output[3]	Difference[4]	# of Forms	Chemical Name
10,615	0	41,047	68,217	68,382	-165	2	Catechol
11,785	0	276	112,453	112,453	0	1	Chlorinated phenols
6,114,410	567,246	46,428	179,225,423	179,213,667	11,756	17	Chlorine
105,342	2,543	44	2,149,716	2,145,206	4,510	2	Chloroacetic acid
581,355	60,192	8,781	33,173,227	33,238,796	-65,569	1	1-Chloro-1,1-difluoroethane (HCFC-142b)
5,134,718	217,267	277,878	26,942,539	27,217,873	-275,334	7	Chlorodifluoromethane (HCFC-22)
87,160	22,313	55,430	1,295,786	1,295,644	142	3	Chloroethane
797,547	0	128,402	1,329,943	1,324,401	5,542	6	Chloroform
59,844	35,372	75,913	4,219,949	4,219,949	0	3	Chloromethane
2,123	6,710	2,810	1,196,094	1,196,094	0	1	Chloromethyl methyl ether
1,044,180	42,223	239,610	4,947,850	4,947,850	0	1	2-Chloro-1,1,2,2-tetra-fluoroethane (HCFC-124)
2,906,217	0	605,585	12,744,262	12,878,714	-134,452	30	Chromium
1,804,714	6,209	252,593	9,426,802	9,337,403	89,399	34	Chromium compounds
1,780,009	0	400,444	4,728,814	4,744,477	-15,663	10	Cobalt
116,291	231	31,033	796,054	809,304	-13,250	13	Cobalt compounds
20,661,120	0	9,446,515	314,249,207	312,802,873	1,446,334	61	Copper
2,374,991	731	3,497,656	30,078,937	29,580,478	498,459	31	Copper compounds
845,144	0	34,849	8,329,703	8,338,417	-8,714	1	Creosote
0	0	14	22,638	22,638	0	1	o-Cresol
154,308	0	1,408	6,025,882	6,027,282	-1,400	2	p-Cresol
236,491	0	1,966	2,907,801	2,907,377	424	4	Cresol (mixed isomers)
10,832,674	7,836	173,206	244,667,138	217,324,760	27,342,378	17	Cumene
368,203	0	131	9,164,055	9,055,689	108,366	1	Cumene hydroperoxide
17,483	124,472	1,454	229,535	333,904	-104,369	7	Cyanide compounds
15,419,610	151,569	127,050	373,370,362	364,563,612	8,806,750	11	Cyclohexane
200,176	0	45,921	2,180,044	2,183,207	-3,163	8	Decabromodiphenyl oxide
432,148	12,928	1,524	1,552,328	1,563,538	-11,210	2	4,4′-Diaminodiphenyl ether
8,140	0	0	102,438	102,438	0	1	2,4-Diaminotoluene
716,850	0	12,370	759,097	759,097	0	2	1,2-Dibromoethane
85,205	0	135,381	1,250,725	1,331,704	-80,979	11	Dibutyl phthalate
309,729	29,552	3,348,583	9,943,200	9,944,121	-921	3	1,2-Dichlorobenzene
162,440	0	768	2,838,309	2,839,077	-768	3	1,4-Dichlorobenzene
10,200	0	0	165,400	165,400	0	1	3,3′-Dichlorobenzidine
9,230,887	6,498	217,206	14,115,100	14,113,066	2,034	7	Dichlorodifluoromethane (CFC-12)
23,257	0	63,738	86,995	86,995	0	1	1,2-Dichloroethane
172,670	0	142,179	4,245,224	4,266,477	-21,253	5	1,1-Dichloro-1-fluoroethane (HCFC-141b)
1,133,287	28,428	5,368,281	10,633,575	10,786,209	-152,634	40	Dichloromethane
46,388	0	105	133,888	133,888	0	1	2,4-Dichlorophenol
114,751	3,080	155,707	1,993,137	1,993,137	0	1	1,2-Dichloropropane
1,424,182	192,057	176,677	8,722,604	8,722,544	60	1	Dichlorotetrafluoroethane (CFC-114)
30,119	243	3,983	34,345	34,345	0	1	2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123)
517,993	2,491	145,982	9,831,179	9,932,657	-101,478	18	Diethanolamine
1,617,372	22,115	162,568	42,278,690	42,323,815	-45,125	16	Di(2-ethylhexyl) phthalate
600,160	14	40,860	5,424,741	5,449,505	-24,764	19	Diethyl phthalate
126,527	41	334	1,474,005	1,473,993	12	5	Diethyl sulfate
47,547	0	36	74,000	74,000	0	1	3,3′-Dimethoxybenzidine
0	440	119	25,988	24,988	1,000	1	Dimethylamine
176,406	83	333	1,758,472	1,758,472	0	2	N,N-Dimethylaniline
7,522	0	963	40,565	45,199	-4,634	1	Dimethyl phthalate
154,816	53	127	892,284	892,294	-10	6	Dimethyl sulfate

Footnotes: see pages 58 and 59

Table 18. 1994 RPPR Throughput Data Reported by New Jersey Facilities,[1] continued
(ordered alphabetically by chemical name; quantities reported in pounds per year)

		Inputs				Outputs →	
CAS #	Chemical Name	Starting Inventory	Produced On-Site	Brought On-Site	Recycled & Re-used On-Site	Consumed On-Site	Shipped Off-Site as (or in) Product
99-65-0	m-Dinitrobenzene	15,629	33,523,359	0	0	32,965,141	0
528-29-0	o-Dinitrobenzene	1,999	4,287,872	0	0	4,216,472	0
100-25-4	p-Dinitrobenzene	545	1,169,420	0	0	1,149,947	0
106-89-8	Epichlorohydrin	90,577	0	599,331	0	516,163	12,960
110-80-5	2-Ethoxyethanol	21,500	0	21,500	0	0	0
140-88-5	Ethyl acrylate	1,192,789	0	44,892,834	0	43,634,651	1,379,081
100-41-4	Ethylbenzene	39,234,396	589,552,185	185,288,300	112,133	1,667,528	769,867,395
74-85-1	Ethylene	231,995	222,507,603	17,208,996	0	84,960,617	61,252,992
107-21-1	Ethylene glycol	6,107,235	1,670,989	171,543,343	2,444	10,386,906	161,810,434
75-21-8	Ethylene oxide	2,055,063	0	61,855,679	0	62,245,910	12
96-45-7	Ethylene thiourea	753	0	165,684	0	0	145,413
50-00-0	Formaldehyde	643,676	196,778	15,639,489	1,003	11,655,935	4,336,682
64-18-6	Formic acid	145,212	0	1,007,700	0	549,860	378,921
76-13-1	Freon 113	646,814	6	1,972,878	223,655	14,964	1,039,409
	Glycol ethers	1,699,905	1,566,587	29,626,137	106,027	1,533,245	25,338,363
118-74-1	Hexachlorobenzene	0	17,620	0	0	0	8,685
67-72-1	Hexachloroethane	5,200	0	46,000	0	0	42,700
70-30-4	Hexachlorophene	30,830	0	0	0	0	0
302-01-2	Hydrazine	38,910	0	264,099	0	210,391	0
10034-93-2	Hydrazine sulfate	1,391	0	118,920	0	103,354	0
7647-01-0	Hydrochloric acid	3,429,034	99,254,911	58,041,962	23,218	37,930,746	60,104,115
7664-39-3	Hydrogen fluoride	2,226,899	622,004	24,524,820	0	17,466,944	19,470
123-31-9	Hydroquinone	146,667	0	1,585,091	0	185,356	1,408,431
78-84-2	Isobutyraldehyde	137,779	0	85,200	0	94,615	0
67-63-0	Isopropyl alcohol (manufacturing, strong acid process only)	11,077	0	393,177	0	0	382,788
80-05-7	4,4'-Isopropylidenediphenol	69,731	0	162,708	0	0	161,016
7439-92-1	Lead	1,147,478	461,196	13,400,179	7,600	0	12,453,964
	Lead compounds	12,227,205	18,440	97,784,814	1,471	0	90,059,204
108-31-6	Maleic anhydride	495,503	0	6,487,220	0	6,430,556	34,803
7439-96-5	Manganese	1,002,068	288,236	9,448,950	19,325	100	1,770,247
	Manganese compounds	428,115	347,955	6,957,674	0	24,561	6,650,056
67-56-1	Methanol	9,851,458	12,911,346	98,582,170	1,023,662	44,815,835	26,991,146
109-86-4	2-Methoxyethanol	8,103	71,570	174,181	0	0	44,672
96-33-3	Methyl acrylate	1,018,478	0	20,766,144	0	11,816,634	9,570,050
1634-04-4	Methyl tert-butyl ether	178,042,590	109,110,000	2,416,602,500	0	0	2,379,833,888
101-14-4	4,4'-Methylene-bis(2-chloroaniline)	7,600	0	138,714	0	141,350	0
101-68-8	Methylene bis(phenyl-isocyanate) (MDI)	383,329	0	9,713,269	0	4,528,426	4,961,580
78-93-3	Methyl ethyl ketone	2,123,844	151,885	32,120,020	627,267	298,047	23,708,807
108-10-1	Methyl isobutyl ketone	609,154	0	6,148,339	765,765	234,560	2,073,875
80-62-6	Methyl methacrylate	434,185	0	7,579,011	408	7,381,752	172
	Mixture	30,704	0	538,111	0	0	539,373
1313-27-5	Molybdenum trioxide	1,028,779	0	3,133,920	0	966,186	3,121,119
76-15-3	Monochloropentafluoroethane (CFC-115)	144,322	5,841,917	82,793	0	1,883,364	3,565,389
91-20-3	Naphthalene	19,142,833	293,130,000	99,895,363	249,364	1,039,744	393,779,028
7440-02-0	Nickel	6,524,876	0	18,047,264	2,441,616	19,011	16,143,583
	Nickel compounds	512,555	0	3,186,899	16	0	2,950,600
7697-37-2	Nitric acid	6,945,841	151,998	119,529,254	300	72,041,800	28,493,627
99-59-2	5-Nitro-o-anisidine	14,851	0	55,359	0	52,756	0
98-95-3	Nitrobenzene	978	28,539,404	810	0	28,445,405	748
55-63-0	Nitroglycerin	1,256	1,007,097	12,135	0	0	902,276

Footnotes: see pages 58 and 59

← Outputs

Ending Inventory	Destroyed On Site	Releases & Transfers	Total Input[2]	Total Output[3]	Difference[4]	# of Forms	Chemical Name
64,586	503,598	100,663	33,538,988	33,633,988	-95,000	1	m-Dinitrobenzene
8,261	64,413	725	4,289,871	4,289,871	0	1	o-Dinitrobenzene
2,253	17,568	197	1,169,965	1,169,965	0	1	p-Dinitrobenzene
124,210	788	32,687	689,908	686,808	3,100	4	Epichlorohydrin
0	18	42,982	43,000	43,000	0	1	2-Ethoxyethanol
1,067,227	950	23,102	46,085,623	46,105,011	-19,388	7	Ethyl acrylate
39,759,085	147,902	899,228	814,074,881	812,341,138	1,733,743	37	Ethylbenzene
227,332	93,096,981	90,365	239,948,594	239,628,287	320,307	7	Ethylene
4,845,954	19,880	2,105,601	179,321,567	179,168,775	152,792	68	Ethylene glycol
1,524,679	36,221	25,839	63,910,742	63,832,661	78,081	9	Ethylene oxide
1,208	0	7,700	166,437	154,321	12,116	1	Ethylene thiourea
257,748	32,218	181,317	16,479,943	16,463,900	16,043	26	Formaldehyde
96,261	83,223	42,886	1,152,912	1,151,151	1,761	10	Formic acid
277,227	18,966	1,274,933	2,619,698	2,625,499	-5,801	11	Freon 113
2,019,083	945,177	3,109,906	32,892,629	32,945,774	-53,145	84	Glycol ethers
0	2,210	6,725	17,620	17,620	0	1	Hexachlorobenzene
8,500	0	0	51,200	51,200	0	1	Hexachloroethane
0	0	0	30,830	0	30,830	1	Hexachlorophene
20,401	69,671	2,240	303,009	302,703	306	3	Hydrazine
16,955	0	2	120,311	120,311	0	1	Hydrazine sulfate
3,768,500	58,623,515	353,700	160,463,907	160,780,576	-316,669	107	Hydrochloric acid
1,455,792	8,446,896	102,188	27,373,723	27,491,290	-117,567	10	Hydrogen fluoride
129,944	0	8,047	1,731,758	1,731,778	-20	6	Hydroquinone
72,814	0	55,604	222,979	223,033	-54	3	Isobutyraldehyde
10,515	0	10,952	404,254	404,255	-1	3	Isopropyl alcohol (mfg., strong acid process only)
8,367	0	526	232,439	169,909	62,530	2	4,4'-Isopropylidenediphenol
1,279,974	0	904,383	15,008,853	14,638,321	370,532	18	Lead
8,420,220	2,800	11,844,308	110,030,459	110,326,532	-296,073	37	Lead compounds
532,290	1,694	38,360	6,982,723	7,037,703	-54,980	17	Maleic anhydride
504,307	0	422,971	10,739,254	2,697,625	8,041,629	20	Manganese
299,156	3,684	799,133	7,733,744	7,776,590	-42,846	19	Manganese compounds
14,119,921	2,601,179	32,006,435	121,344,974	122,696,973	-1,351,999	104	Methanol
18,871	185,538	80,794	253,854	329,875	-76,021	2	2-Methoxyethanol
346,158	27,457	21,079	21,784,622	21,781,378	3,244	7	Methyl acrylate
290,626,909	244,912	421,294	2,703,755,090	2,671,127,003	32,628,087	8	Methyl tert-butyl ether
4,964	0	0	146,314	146,314	0	1	4,4'-Methylene-bis(2-chloroaniline)
302,014	0	22,955	10,096,598	9,814,975	281,623	16	Methylene bis(phenyl-isocyanate) (MDI)
2,110,373	4,155,825	3,476,473	34,395,749	33,749,525	646,224	76	Methyl ethyl ketone
801,726	1,403,241	2,264,201	6,757,493	6,777,603	-20,110	48	Methyl isobutyl ketone
402,464	121,535	53,898	8,013,196	7,959,821	53,375	15	Methyl methacrylate
28,671	0	772	568,815	568,816	-1	3	Mixture
6,000	0	124,806	4,162,699	4,218,111	-55,412	4	Molybdenum trioxide
250,266	103,718	266,295	6,069,032	6,069,032	0	1	Monochloropentafluoroethane (CFC-115)
16,885,411	101,199	86,298	412,168,196	411,891,680	276,516	22	Naphthalene
7,933,700	0	445,132	24,572,140	24,541,426	30,714	24	Nickel
632,788	1,002	83,808	3,699,454	3,668,198	31,256	21	Nickel compounds
6,427,284	19,197,163	1,015,950	126,627,093	127,175,824	-548,731	40	Nitric acid
14,936	0	29	70,210	67,721	2,489	3	5-Nitro-o-anisidine
183	92,833	3,035	28,541,192	28,542,204	-1,012	1	Nitrobenzene
1,308	71,214	12,626	1,020,488	987,424	33,064	2	Nitroglycerin

Footnotes: see pages 58 and 59

Table 18. 1994 RPPR Throughput Data Reported by New Jersey Facilities,[1] continued
(ordered alphabetically by chemical name; quantities reported in pounds per year)

		Inputs				Outputs →	
CAS #	Chemical Name	Starting Inventory	Produced On-Site	Brought On-Site	Recycled & Re-used On-Site	Consumed On-Site	Shipped Off-Site as (or in) Product
99-55-8	5-Nitro-o-toluidine	5,431	0	29,040	0	28,035	0
79-21-0	Peracetic acid	3,000	0	35,000	0	37,062	0
108-95-2	Phenol	738,802	4,476,278	10,788,000	0	10,849,238	3,190,912
106-50-3	p-Phenylenediamine	226,158	352,251	747,784	0	21,169	1,015,702
90-43-7	2-Phenylphenol	23,671	0	168,725	0	38,700	129,344
75-44-5	Phosgene	48,000	56,457,401	1,428,000	0	57,369,676	0
7664-38-2	Phosphoric acid	1,373,259	5,563,685	15,581,169	2,829	3,239,226	8,078,226
85-44-9	Phthalic anhydride	4,155,900	0	84,256,873	0	74,728,732	7,730,082
88-89-1	Picric acid	0	326,658	0	0	163,329	0
123-38-6	Propionaldehyde	104,448	0	1,304,490	0	1,373,828	0
115-07-1	Propylene	7,069,629	1,019,514,355	352,277,359	0	764,259,800	501,625,007
75-56-9	Propylene oxide	742,834	0	32,702,979	0	30,948,317	96,902
75-55-8	Propyleneimine	17,826	0	57,139	0	64,527	0
110-86-1	Pyridine	23,475	0	5,280	0	0	0
7782-49-2	Selenium	10,475	0	36,729	1,817	0	2,439
	Selenium compounds	13,464	0	21,682	381	0	19,729
7440-22-4	Silver	845,203	0	1,768,413	85,100	0	1,750,005
	Silver compounds	790,578	0	2,717,998	87,260	1,352,483	1,319,567
100-42-5	Styrene	1,595,446	0	175,731,371	0	174,362,176	294,783
96-09-3	Styrene oxide	1,765	0	145,834	0	122,101	0
7664-93-9	Sulfuric acid (acid aerosol forms only)[5]	18,036,771	216,455	405,568,516	211,885	120,064,406	142,349,107
127-18-4	Tetrachloroethylene	134,733	0	271,557	27,228	55,496	129,758
961-11-5	Tetrachlorvinphos	346,825	0	494,008	16,212	0	161,289
62-56-6	Thiourea	17,835	0	494,800	0	233,450	25,341
137-26-8	Thiram	0	0	84,717	0	0	55,286
7550-45-0	Titanium tetrachloride	518,706	0	5,738,191	0	5,418,964	286,262
108-88-3	Toluene	106,904,607	1,417,071,200	820,523,536	1,634,461	105,155,184	2,105,179,284
584-84-9	Toluene-2,4-diisocyanate	29,635	0	410,803	0	427,774	33
91-08-7	Toluene-2,6-diisocyanate	2,849	0	74,000	0	75,613	0
26471-62-5	Toluenediisocyanate (mixed isomers)	339,963	0	14,224,551	0	14,185,607	0
95-53-4	o-Toluidine	127,299	30,067	6,683,113	0	1,093,774	5,615,245
71-55-6	1,1,1-Trichloroethane	1,231,779	0	48,296,361	99,916	46,409,136	1,077,740
79-01-6	Trichloroethylene	202,808	0	1,105,172	23,036	0	234,656
75-69-4	Trichlorofluoromethane (CFC-11)	653,850	0	3,812,108	0	0	2,234,693
95-63-6	1,2,4-Trimethylbenzene	28,836,707	367,998,212	210,860,231	1,404,818	1,882,636	576,470,906
108-05-4	Vinyl acetate	3,963,777	0	200,134,647	1,126	124,422,912	78,450,562
75-01-4	Vinyl chloride	7,828,358	0	493,458,468	150,000	495,015,864	445
75-35-4	Vinylidene chloride	44,945	0	296,080	0	315,739	0
95-47-6	o-Xylene	87,224	0	530,981	27,198	72,377	67,170
1330-20-7	Xylene (mixed isomers)	128,389,678	1,854,314,040	914,383,584	801,264	7,803,287	2,752,288,765
87-62-7	2,6-Xylidine	18,683	24,674	47,426	0	51,968	31,389
7440-66-6	Zinc (fume or dust)	802,537	9,591,780	2,371,950	69,740	515,682	1,784,578
	Zinc compounds	1,912,173	456,510	27,220,031	869	687,897	25,810,029
1994 TOTALS		778,667,926	7,040,292,152	8,731,987,885	14,056,757	3,170,841,179	11,780,959,878

Footnotes:
1. Five facilities and 34 chemical records are not included in the throughput data analyses as a result of trade secret claims on that data; these data do include three non-manufacturing sector facilities that submitted eight RPPRs.
2. Total Input = starting inventory + quantity produced on site + quantity brought on site.
3. Total Output = quantity consumed on site + quantity shipped off site + ending inventory + quantity destroyed through on-site treatment + air emissions + water discharges + on-site land releases + off-site transfers.

← Outputs

Ending Inventory	Destroyed On Site	Releases & Transfers	Total Input[2]	Total Output[3]	Difference[4]	# of Forms	Chemical Name
6,378	0	58	34,471	34,471	0	2	5-Nitro-o-toluidine
920	0	18	38,000	38,000	0	1	Peracetic acid
937,830	580,437	439,944	16,003,080	15,998,361	4,719	12	Phenol
249,953	11,337	28,032	1,326,193	1,326,193	0	3	P-Phenylenediamine
23,967	0	387	192,396	192,398	-2	2	2-Phenylphenol
0	562,558	1,167	57,933,401	57,933,401	0	2	Phosgene
1,380,259	9,648,573	218,459	22,518,113	22,564,743	-46,630	69	Phosphoric acid
4,751,720	22,214	65,324	88,412,773	87,298,072	1,114,701	19	Phthalic anhydride
0	163,329	0	326,658	326,658	0	1	Picric acid
31,750	0	3,620	1,408,938	1,409,198	-260	3	Propionaldehyde
5,719,910	137,529,105	183,093	1,378,861,343	1,409,316,915	-30,455,572	10	Propylene
1,768,908	8	5,614	33,445,813	32,819,749	626,064	6	Propylene oxide
10,270	0	168	74,965	74,965	0	1	Propyleneimine
13,564	0	15,191	28,755	28,755	0	1	Pyridine
18,247	0	28,335	47,204	49,021	-1,817	1	Selenium
14,916	0	1,488	35,146	36,133	-987	3	Selenium compounds
852,588	0	12,108	2,613,616	2,614,701	-1,085	6	Silver
807,533	0	10,592	3,508,576	3,490,175	18,401	5	Silver compounds
2,558,357	3,552	133,417	177,326,817	177,352,285	-25,468	22	Styrene
25,494	0	4	147,599	147,599	0	2	Styrene oxide
23,032,231	26,723,511	38,922,783	423,821,742	351,092,038	72,729,704	112	Sulfuric acid (acid aerosol forms only)[5]
137,094	0	102,922	406,290	425,270	-18,980	7	Tetrachloroethylene
677,752	0	120	840,833	839,161	1,672	1	Tetrachlorvinphos
26,800	94	2,663	512,635	288,348	224,287	2	Thiourea
1,672	0	1,678	84,717	58,636	26,081	1	Thiram
398,146	0	7,074	6,256,897	6,110,446	146,451	3	Titanium tetrachloride
107,019,248	4,955,827	8,943,608	2,344,499,343	2,331,253,151	13,246,192	122	Toluene
13,363	0	19	440,438	441,189	-751	4	Toluene-2,4-diisocyanate
1,224	0	12	76,849	76,849	0	2	Toluene-2,6-diisocyanate
379,010	1,177	91	14,564,514	14,565,885	-1,371	4	Toluenediisocyanate (mixed isomers)
82,497	2,509	46,454	6,840,479	6,840,479	0	5	o-Toluidine
1,283,821	0	807,894	49,528,140	49,578,591	-50,451	43	1,1,1-Trichloroethane
270,301	0	655,061	1,307,980	1,160,018	147,962	10	Trichloroethylene
1,855,307	0	227,012	4,465,958	4,317,012	148,946	4	Trichlorofluoromethane (CFC-11)
27,601,819	138,944	411,886	607,695,150	606,506,191	1,188,959	33	1,2,4-Trimethylbenzene
1,085,670	37,054	105,480	204,098,424	204,101,678	-3,254	13	Vinyl acetate
5,647,852	578,000	43,477	501,286,826	501,285,638	1,188	3	Vinyl chloride
25,186	0	766	341,025	341,691	-666	2	Vinylidene chloride
115,635	0	97,278	618,205	352,460	265,745	3	o-Xylene
130,933,290	1,865,689	6,283,742	2,897,087,302	2,899,174,773	-2,087,471	96	Xylene (mixed isomers)
5,115	1,362	910	90,783	90,744	39	3	2,6-Xylidine
813,449	0	9,654,181	12,766,267	12,767,890	-1,623	11	Zinc (fume or dust)
1,921,873	6,967	987,683	29,588,714	29,414,449	174,265	71	Zinc compounds
908,129,187	380,099,237	167,271,923	16,550,685,963	16,409,463,861	141,222,102	2,434	1994 TOTALS

Footnotes:

4. Difference = Input - Output (a positive value means that a larger quantity was accounted for on the input side of the equation; a negative value means that a larger quantity was accounted for on the output side of the equation).
5. USEPA modified the reporting requirements for sulfuric acid from "solution" to "acid aerosol forms only" for RY 1994 and offered facilities the option to revise their submissions. As noted by the large quantities of off-site transfers reported, it is apparent that many facilities did not exercise this option.

1994 Release and Pollution Prevention Report
Self Verification of Materials Accounting Data

(All Quantities Must Be Reported In Pounds)

NJEIN: _____ **CAS#:** _____ **Substance:** _____

Inputs

5. Starting Inventory _____

6. Quantity Produced on site _____

7. Quantity Brought on site _____

Outputs

9. Quantity Consumed (chemically altered in process) _____

10. Quantity Shipped Off Site as (or in) Product _____

11. Ending Inventory _____

13. Quantity Destroyed through On-Site Treatment _____

14. Quantity Destroyed through On-Site Energy Recovery _____

15. Stack Air Emissions _____

16. Fugitive Air Emissions _____

17. Discharge to POTWs _____

18. Discharge to Surface Waters _____

19. Discharge to Ground Water _____

20. On-Site Land Disposal _____

21. Other Off-Site Transfers _____

Sum of Inputs: _____ ≈ **Sum of Outputs:** _____

Figure 10. Self Verification of Materials Accounting Data Worksheet

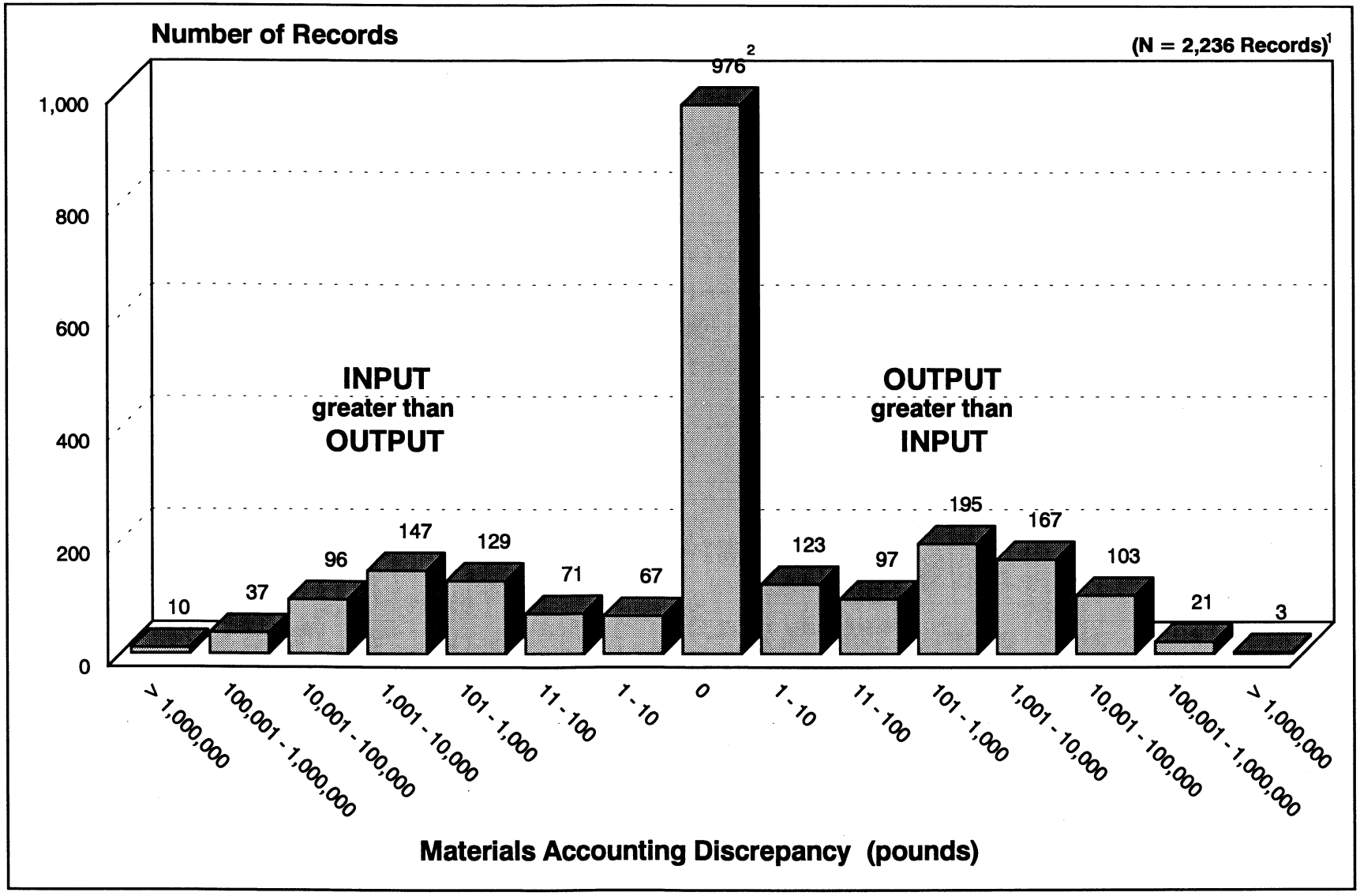


Figure 11. Number of Records by Quantitative Difference in Materials Balance, 1994 RPPR

1. These data do not include ammonia, sulfuric acid, and chemical reports that claimed confidential business information.
2. A materials accounting balance was reported for 976 chemical records, that is Input = Output.

Table 19. 1994 Release and Pollution Prevention Report

Materials Accounting Discrepancy by Quantitative Difference

Top 10 Chemical Records by Positive Quantitative Difference (Input exceeds Output)

Facility Name	County	City	Chemical	Input[1]	Output[2]	Difference[3*]	Percent Error[4*]
Bayway Refining Company	Union	Linden	Sulfuric acid	82,700,000	10,810,000	71,810,000	86.90
Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	Methyl tert-butyl ether	420,561,858	386,498,662	34,063,196	8.10
Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	Cumene	127,688,936	101,008,941	26,679,995	20.89
Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	Toluene	426,802,052	413,292,493	13,509,559	3.17
Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	Cyclohexane	22,842,491	14,504,283	8,338,208	36.50
New Jersey Steel Corporation	Middlesex	Sayreville	Manganese	8,560,209	556,570	8,003,639	93.50
Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	Xylene (mixed isomers)	474,945,154	469,898,124	5,047,030	1.06
Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	Ethylbenzene	186,574,585	184,000,787	2,573,798	1.38
Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	Benzene	119,858,398	118,102,412	1,755,986	1.47
Alcan Aluminum Corp	Union	Union Twp	Copper	17,145,752	16,046,015	1,099,737	6.41

Top 10 Chemical Records by Negative Quantitative Difference (Output exceeds Input)

Facility Name	County	City	Chemical	Input	Output	Difference	Percent Error
Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	Propylene	79,349,075	110,776,746	-31,427,671	-28.37
Bayway Refining Co	Union	Linden	Xylene (mixed isomers)	1,305,100,000	1,311,339,425	-6,239,425	-0.48
Bayway Refining Co	Union	Linden	Methyl tert-butyl ether	1,292,900,000	1,294,371,285	-1,471,285	-0.11
Reichhold Chemical Inc	Essex	Newark	Xylene (mixed isomers)	7,541,716	8,482,514	-940,798	-11.09
Bayway Refining Co	Union	Linden	Ethylbenzene	405,400,000	406,224,984	-824,984	-0.20
General Motors Corp	Middlesex	New Brunswick	Lead compounds	65,840,000	66,560,697	-720,697	-1.08
Bayway Refining Co	Union	Linden	Benzene	320,300,000	320,970,005	-670,005	-0.21
Nesor Alloy Corporation	Essex	Fairfield	Copper	15,886,457	16,232,457	-346,000	-2.13
J T Baker Inc	Warren	Phillipsburg	Nitric acid	5,190,874	5,521,472	-330,598	-5.99
J T Baker Inc	Warren	Phillipsburg	Hydrochloric acid	3,883,764	4,203,005	-319,241	-7.60

Footnotes:

1. Total Input = starting inventory + quantity produced on site + quantity brought on site.
2. Total Output = quantity consumed on site + quantity shipped off site + ending inventory + quantity destroyed through on-site treatment + air emissions + water discharges + on-site land releases + off-site transfers.
3. Difference = Input - Output (a positive value means that a larger quantity was accounted for on the input side of the equation; a negative value means that a larger quantity was accounted for on the output side of the equation).
4. Percent Error = (Input - Output)/Input x 100, where Input is greater than Output, or
   (Input - Output)/Output x 100, where Output is greater than Input.

* As a result of the simplified mass balance approach, the various methods of materials accounting employed by facilities, the various estimation techniques for on-site releases and off-site transfers, and other factors, materials accounting discrepancies are not unusual. The Department performs an assessment of the balance, or closure, achieved in the accounting process for every chemical record. Starting with the chemical records with the largest quantitative differences, Department staff contact facility environmental managers and notify them of the findings. See pages 48 and 49 for a further discussion of this issue.

Table 20. 1994 Release and Pollution Prevention Report

Materials Accounting Discrepancy by Percent Error

Top 10 Chemical Records where Input exceeds Output

Facility Name	County	City	Chemical	Input[1]	Output[2]	Difference[3*]	Percent Error[4*]
Anheuser Busch Inc	Essex	Newark	Dichlorodifluoromethane (CFC-12)	2,000	0	2,000	100.00
Givaudan Roure Corporation	Passaic	Clifton	Hexachlorophene	30,830	0	30,830	100.00
Fabrite Laminating Corporation	Bergen	Wood-Ridge	Trichloroethylene	132,667	4,403	128,264	96.68
New Jersey Steel Corporation	Middlesex	Sayreville	Manganese	8,560,209	556,570	8,003,639	93.50
Ganes Chemicals Inc	Salem	Pennsville Twp	Toluene	326,157	25,208	300,949	92.27
Dietzgen Corp	Middlesex	East Brunswick Twp	Thiourea	251,815	27,515	224,300	89.07
Congress Industries Inc	Passaic	Hawthorne	Toluene	9,000	1,200	7,800	86.67
Congress Industries Inc	Passaic	Hawthorne	Xylene (mixed isomers)	9,000	1,200	7,800	86.67
Johnson & Johnson CPI	Middlesex	North Brunswick Twp	Ethylene oxide	133,720	18,455	115,265	86.20
Croda Inks Corp	Mercer	Ewing Twp	Barium compounds	11,588	1,771	9,817	84.72

Top 10 Chemical Records where Output exceed Input

Facility Name	County	City	Chemical	Input	Output	Difference	Percent Error
Metem Corporation	Morris	Parsippany-Troy Hill	Cobalt	0	8,752	-8,752	-100.00
Kenrich Petrochemicals Inc	Hudson	Bayonne	Formaldehyde	0	12,401	-12,401	-100.00
Electrum Recovery Works Inc	Union	Rahway	Lead compounds	0	215,281	-215,281	-100.00
Coastal Eagle Point Oil Company	Gloucester	West Deptford Twp	Molybdenum trioxide	0	17,442	-17,442	-100.00
Atlantic States Cast Iron Pipe	Warren	Phillipsburg	Toluene	1,600	194,748	-193,148	-99.18
Renco Finishing Corp	Bergen	Fair Lawn	1,2,4-Trimethylbenzene	440	33,770	-33,330	-98.70
Mobil Oil Corporation	Gloucester	Greenwich Twp	Molybdenum trioxide	10,400	90,400	-80,000	-88.50
Atlantic States Cast Iron Pipe	Warren	Phillipsburg	Barium	4,920	31,634	-26,714	-84.45
Kimble Glass Inc	Cumberland	Vineland	Barium compounds	75,565	248,678	-173,113	-69.61
Technical Coatings Co	Essex	Nutley	Methanol	22,000	66,796	-44,796	-67.06

Footnotes:

1. Total Input = starting inventory + quantity produced on site + quantity brought on site.
2. Total Output = quantity consumed on site + quantity shipped off site + ending inventory + quantity destroyed through on-site treatment + air emissions + water discharges + on-site land releases + off-site transfers.
3. Difference = Input - Output (a positive value means that a larger quantity was accounted for on the input side of the equation; a negative value means that a larger quantity was accounted for on the output side of the equation).
4. Percent Error = (Input - Output)/Input x 100, where Input is greater than Output, or
   (Input - Output)/Output x 100, where Output is greater than Input.

* As a result of the simplified mass balance approach, the various methods of materials accounting employed by facilities, the various estimation techniques for on-site releases and off-site transfers, and other factors, materials accounting discrepancies are not unusual. The Department performs an assessment of the balance, or closure, achieved in the accounting process for every chemical record. Starting with the chemical records with the largest quantitative differences, Department staff contact facility environmental managers and notify them of the findings. See pages 48 and 49 for a further discussion of this issue.

Table 21. 1994 RPPR Throughput Data Reported by New Jersey Facilities[1]
(ordered alphabetically by county; quantities reported in pounds per year)

			Inputs				Outputs →	
County	Number of Facilities	# of Forms	Starting Inventory	Produced On-Site	Brought On-Site	Recycled & Re-used On-Site	Consumed On-Site	Shipped Off-Site
Atlantic	5	7	125,674	79,302	431,342	0	244,081	148,257
Bergen	81	267	3,827,791	1,120,204	75,607,004	1,081,373	24,707,079	38,483,537
Burlington	26	97	7,888,617	3,815,706	213,064,135	193,600	154,826,764	32,533,186
Camden	26	76	7,507,609	1,601,125	44,947,701	64,791	6,555,210	37,165,527
Cape May	0	0	0	0	0	0	0	0
Cumberland	7	7	154,240	0	2,912,980	0	2,525,016	200,543
Essex	78	318	27,387,080	6,179,537	458,654,160	372,945	57,186,846	377,859,170
Gloucester	27	158	245,528,542	2,859,064,384	1,887,726,482	84,207	842,500,190	3,592,626,777
Hudson	31	97	4,958,228	15,207,271	117,166,580	2,830,580	83,365,163	33,596,012
Hunterdon	6	17	4,549,618	0	16,719,762	771,951	5,629,449	7,691,311
Mercer	17	43	650,648	0	11,715,916	279,730	856,415	9,028,069
Middlesex	109	490	147,915,045	549,332,679	2,466,954,825	709,230	782,382,078	2,099,229,478
Monmouth	16	56	5,819,487	229,787	163,812,777	2,118,191	2,690,669	154,004,132
Morris	36	74	10,140,058	1,054,591	28,433,416	588,058	1,806,839	22,785,216
Ocean	4	7	40,829	0	409,278	18,854	0	378,077
Passaic	67	188	4,372,526	594,707	89,419,709	558,379	22,051,801	57,636,683
Salem	8	99	32,939,737	161,975,311	660,353,887	749,053	725,375,194	34,682,712
Somerset	25	100	1,618,722	138,643	74,643,144	178,324	56,430,614	15,462,342
Sussex	5	8	133,462	0	925,176	111,899	0	0
Union	65	257	265,526,185	3,432,960,938	2,259,778,176	3,345,592	276,051,348	5,232,021,987
Warren	14	68	7,583,828	6,937,967	158,311,435	0	125,656,423	35,426,862
1994 TOTALS	653	2,434	778,667,926	7,040,292,152	8,731,987,885	14,056,757	3,170,841,179	11,780,959,878

Footnotes:
1. Five facilities and 34 chemical records are not included in the throughput data analyses as a result of trade secret claims on that data. Includes data from three non-manufacturing sector facilities that submitted eight RPPRs.
2. Total Input = starting inventory + quantity produced on site + quantity brought on site.

1994 RPPR Throughput Data Summary by County

← Outputs						
Ending Inventory	Destroyed On Site	Releases & Transfers	Total Input[2]	Total Output[3]	Difference[4]	County
106,445	0	134,641	636,318	633,424	2,894	Atlantic
3,397,020	4,344,995	9,975,879	80,554,999	80,908,510	-353,511	Bergen
9,047,155	5,933,700	22,658,876	224,768,458	224,999,681	-231,223	Burlington
7,095,425	1,600,173	1,581,973	54,056,435	53,998,308	58,127	Camden
0	0	0	0	0	0	Cape May
138,881	328,612	92,977	3,067,220	3,286,029	-218,809	Cumberland
21,507,444	13,611,236	22,273,988	492,220,777	494,601,141	-2,380,364	Essex
240,270,954	250,869,315	3,510,670	4,992,319,408	4,929,777,906	62,541,502	Gloucester
5,423,998	8,049,363	6,871,062	137,332,079	137,305,598	26,481	Hudson
4,643,791	3,189,445	122,914	21,269,380	21,276,910	-7,530	Hunterdon
611,850	947,435	596,339	12,366,564	12,040,108	326,456	Mercer
183,704,109	27,785,030	60,269,197	3,164,202,549	3,153,369,892	10,832,657	Middlesex
3,815,807	3,057,737	5,936,734	169,862,051	169,505,079	356,972	Monmouth
11,773,948	1,309,946	1,821,421	39,628,065	39,497,370	130,695	Morris
25,307	0	20,582	450,107	423,966	26,141	Ocean
3,914,262	4,075,732	5,682,914	94,386,942	93,361,392	1,025,550	Passaic
39,166,138	42,912,140	8,780,676	855,268,935	850,916,860	4,352,075	Salem
2,271,125	1,583,955	1,040,612	76,400,509	76,788,648	-388,139	Somerset
192,120	529,332	323,169	1,058,638	1,044,621	14,017	Sussex
362,447,921	7,992,169	14,354,242	5,958,265,299	5,892,867,667	65,397,632	Union
8,575,487	1,978,922	1,223,057	172,571,230	172,860,751	-289,521	Warren
908,129,187	380,099,237	167,271,923	16,550,685,963	16,409,463,861	141,222,102	1994 TOTALS

Footnotes:

3. Total Output = quantity consumed on site + quantity shipped off site + ending inventory + quantity destroyed through on-site treatment + air emissions + water discharges + on-site land releases + off-site transfers.
4. Difference = Input - Output (a positive value means that a larger quantity was accounted for on the input side of the equation; a negative value means that a larger quantity was accounted for on the output side of the equation).

Table 22. 1994 RPPR Throughput Data Reported by New Jersey Facilities[1]
(ordered numerically by SIC code; quantities reported in pounds per year)

SIC Category	Number of Facilities	# of Forms	Inputs: Starting Inventory	Inputs: Produced On-Site	Inputs: Brought On-Site	Recycled & Re-used On-Site	Outputs →: Consumed On-Site	Outputs →: Shipped Off-Site
20 Food & Kindred Products	29	63	1,679,217	332,683	16,259,679	305,763	13,015,972	501,188
21 Tobacco Manufacturing	0	0	0	0	0	0	0	0
22 Textile Mill Products	18	36	75,029	0	1,611,431	56,572	47,672	180,888
23 Apparel & Other Textile Products	0	0	0	0	0	0	0	0
24 Lumber & Wood Products	4	7	747,499	0	8,903,299	0	540,455	8,058,235
25 Furniture & Fixtures	2	2	2,237	0	26,781	0	0	0
26 Paper & Allied Products	20	39	509,459	233,616	9,152,822	43,160	3,918,956	1,832,190
27 Printing & Publishing	12	27	367,001	0	2,587,083	0	205,816	13,365
28 Chemicals & Allied Products	259	1357	146,079,074	377,958,929	2,924,523,785	5,075,847	2,322,361,291	740,810,380
29 Petroleum & Coal Products	17	117	570,460,175	6,649,701,875	5,022,649,676	2,855,199	779,332,287	10,394,178,508
30 Rubber & Miscellaneous Plastics Products	56	127	3,321,489	54,437	86,412,481	639,368	28,150,051	54,584,768
31 Leather & Leather Products	3	13	95,157	95,536	4,883,594	0	4,235,639	308,088
32 Stone, Clay, & Glass Products	13	33	601,282	198,581	8,249,983	108,820	4,350,542	2,850,037
33 Primary Metal Industries	56	166	32,148,898	11,554,076	343,360,257	4,281,221	6,961,527	310,641,663
34 Fabricated Metal Products	81	239	6,202,727	0	50,062,024	403,816	1,281,008	29,773,193
35 Machinery, except Electrical	20	53	12,452,316	0	139,501,444	10,920	459,813	146,171,557
36 Electrical & Electronic Products	28	38	2,078,855	0	88,844,350	85,706	170,995	77,887,492
37 Transportation Equipment	5	34	850,498	0	14,903,784	0	2,435,676	9,057,864
38 Instruments & Related Products	20	61	736,742	162,419	7,705,482	20,753	3,172,535	2,861,127
39 Miscellaneous Manufacturing	8	17	209,696	0	1,981,114	169,612	22,711	1,064,898
TOTALS (Manufacturing)	651	2,429	778,617,351	7,040,292,152	8,731,619,069	14,056,757	3,170,662,946	11,780,775,441
Non-Manufacturing Sector	2	5	50,575	0	368,816	0	178,233	184,437
1994 TOTALS	653	2,434	778,667,926	7,040,292,152	8,731,987,885	14,056,757	3,170,841,179	11,780,959,878

Footnotes:
1. Five facilities and 34 chemical records are not included in the throughput data analyses as a result of trade secret claims on that data.
2. Total Input = starting inventory + quantity produced on site + quantity brought on site.

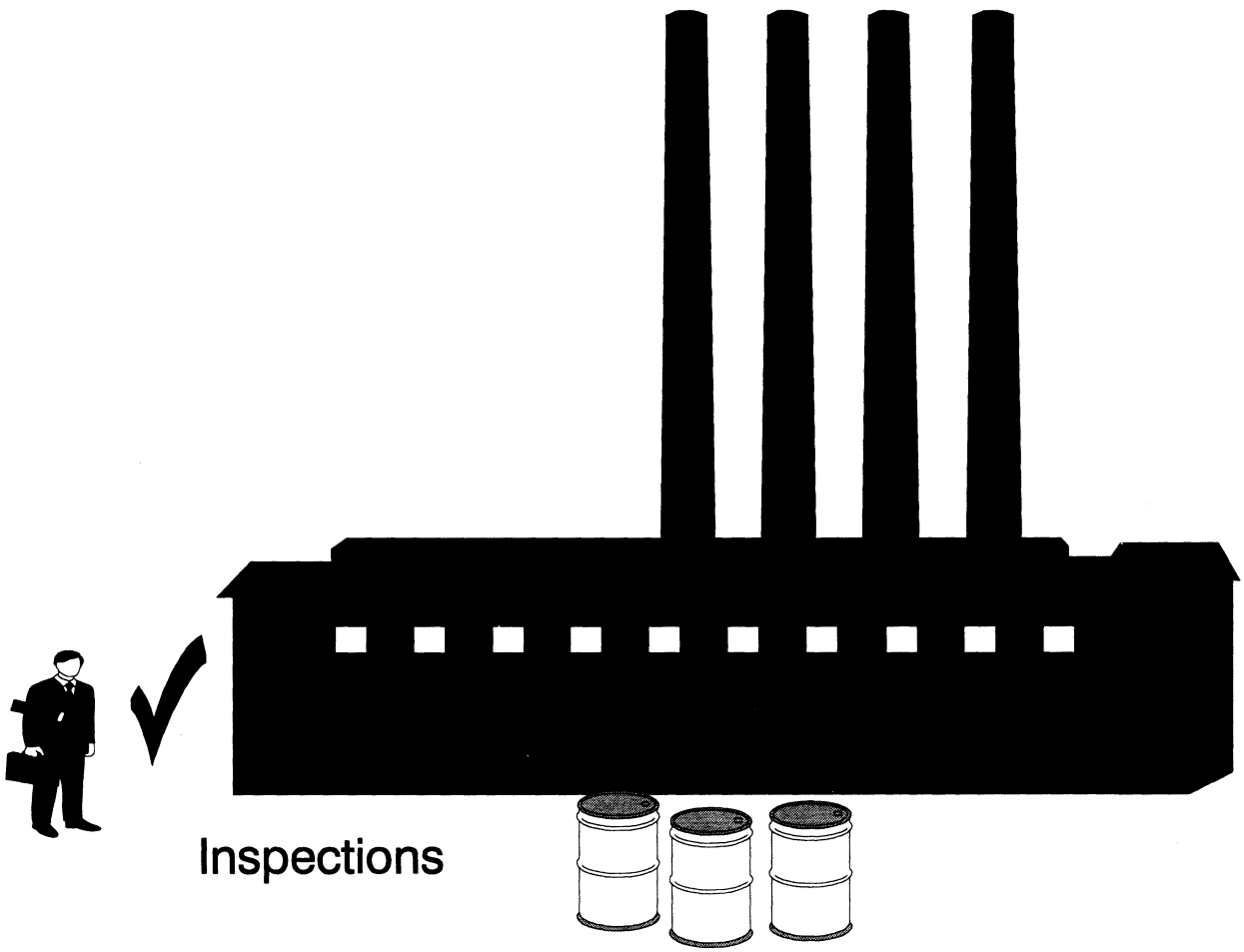
1994 RPPR Throughput Data Summary by SIC Code

← Outputs						
Ending Inventory	Destroyed On Site	Releases & Transfers	Total Input[2]	Total Output[3]	Difference[4]	SIC Category
861,338	1,239,393	2,533,677	18,271,579	18,151,568	120,011	20 Food, etc.
0	0	0	0	0	0	21 Tobacco Mfg.
92,923	678,892	650,906	1,686,460	1,651,281	35,179	22 Textile Mills
0	0	0	0	0	0	23 Apparel, etc.
939,784	0	142,553	9,650,798	9,681,027	-30,229	24 Lumber & Wood
2,578	0	26,690	29,018	29,268	-250	25 Furniture, etc.
642,833	2,293,284	1,024,313	9,895,897	9,711,576	184,321	26 Paper, etc.
487,527	1,756,678	463,115	2,954,084	2,926,501	27,583	27 Printing, etc.
155,381,462	134,501,610	89,427,495	3,448,299,788	3,444,644,695	3,655,093	28 Chemicals, etc.
696,360,121	223,454,387	21,859,974	12,242,811,726	12,115,185,277	127,626,449	29 Petroleum, etc.
3,929,518	1,590,540	1,377,946	89,788,407	89,632,823	155,584	30 Rubber, etc.
132,285	305	397,598	5,074,287	5,073,915	372	31 Leather, etc.
820,051	601,505	675,355	9,049,846	9,297,490	-247,644	32 Stone, etc.
34,145,802	3,340,308	23,996,508	387,063,231	379,085,808	7,977,423	33 Primary Metals
7,078,988	8,050,801	8,872,281	56,264,751	55,056,271	1,208,480	34 Fabr. Metals
3,458,172	923,871	724,025	151,953,760	151,737,438	216,322	35 Machinery
1,872,478	261,069	10,731,085	90,923,205	90,923,119	86	36 Electrical
847,875	805,860	2,574,958	15,754,282	15,722,233	32,049	37 Transportation
712,457	124,701	1,433,660	8,604,643	8,304,480	300,163	38 Instruments
306,274	476,033	359,536	2,190,810	2,229,452	-38,642	39 Misc. Mfg.
908,072,466	380,099,237	167,271,675	16,550,266,572	16,409,044,222	141,222,350	Mfg. Sector
56,721	0	248	419,391	419,639	-248	Non-Mfg. Sector
908,129,187	380,099,237	167,271,923	16,550,685,963	16,409,463,861	141,222,102	1994 TOTALS

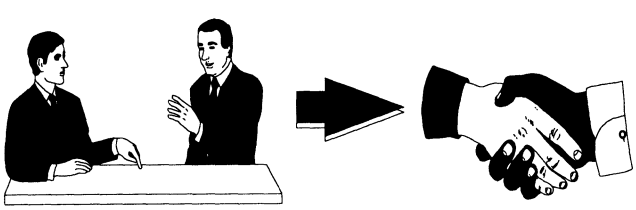
Footnotes:

3. Total Output = quantity consumed on site + quantity shipped off site + ending inventory + quantity destroyed through on-site treatment + air emissions + water discharges + on-site land releases + off-site transfers.
4. Difference = Input - Output (a positive value means that a larger quantity was accounted for on the input side of the equation; a negative value means that a larger quantity was accounted for on the output side of the equation).

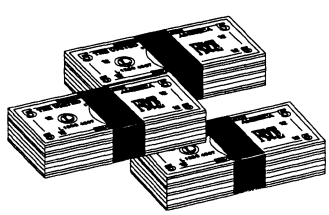
COMMUNITY RIGHT TO KNOW COMPLIANCE ACTIVITIES



Inspections



Cooperation



Penalties

COMMUNITY RIGHT TO KNOW COMPLIANCE ACTIVITIES

The department continued to focus outreach activities to achieve greater compliance for the Community Right to Know Survey for 1994. During calendar year 1995, as in 1994, the focus on large companies rather than smaller businesses continued due to the implementation of reporting thresholds as part of recent regulatory changes. Activities also focused on inspecting individual companies having multiple locations within the state rather than single-site companies.

Figures 12 and 13 present the compliance rates for reporting years 1994, 1993 and 1992 for the manufacturing sector and certain non-manufacturing sector employers regulated by the New Jersey Worker and Community Right to Know Act.

Two additional types of audit inspections initiated for survey year 1993 were continued in 1995 for survey year 1994. The first concerned facilities having research and development (R&D) laboratory reporting exemptions. A facility may obtain an exemption from reporting chemicals in an area which is used primarily for R&D activities if certain criteria are met. Results of the audit inspections were used to verify the facility's R&D activities and the validity of its exemption from Community Right to Know reporting. Audits were also performed at manufacturing facilities reporting inventories of EPCRA Section 313 toxic chemicals exceeding 10,000 pounds on the CRTK survey that had not submitted Release and Pollution Prevention Reports (DEQ-114).

Emphasis was placed on referrals from both within the department and from outside agencies. Coordination with county, local health, police and fire departments and fire prevention bureaus was found to be beneficial in increasing awareness of, and compliance with, CRTK reporting requirements. The number of audits conducted by the department in each county are presented in Figure 14.

A total of 616 administrative orders were issued for reporting year 1994, a significant increase from 499 administrative orders issued for reporting year 1993 and 295 for reporting year 1992. The increase can be attributed to the use of additional office personnel to assist in processing enforcement documents. Orders resulted in the assessment of more than $603,000 in penalties.

Figure 15 represents an evaluation of Community Right to Know Survey compliance by county. The compliance rate ranged from 87% to 97%. The greatest increase (4%) from 1993 rates was observed in Salem County.

1994 Surveys Mailed = 12,506 | 1994 Surveys Returned = 11,698 | 1994 Compliance = 94%
1993 Surveys Mailed = 12,540 | 1993 Surveys Returned = 11,605 | 1993 Compliance = 93%
1992 Surveys Mailed = 12,559 | 1992 Surveys Returned = 11,644 | 1992 Compliance = 93%

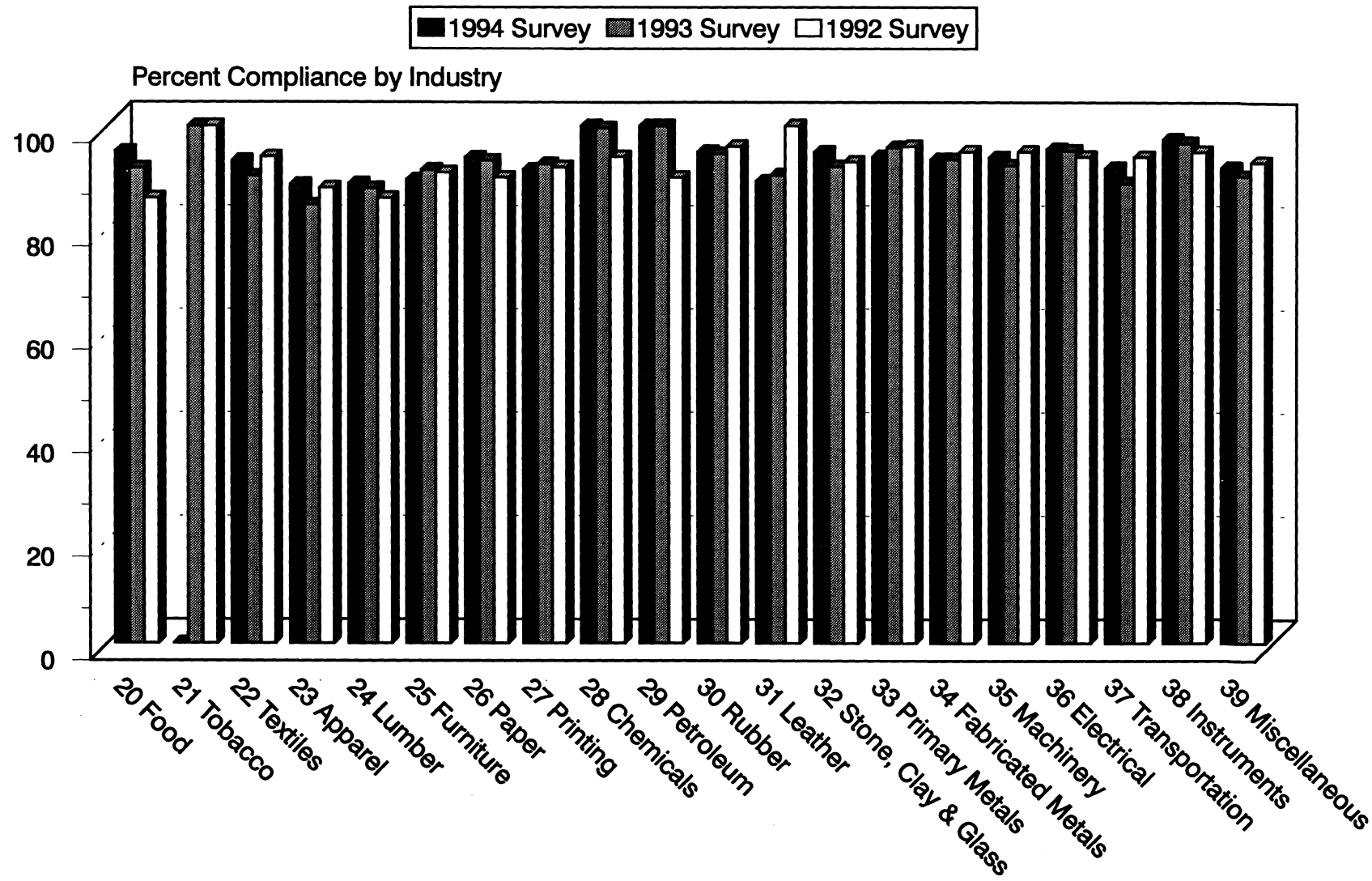


Figure 12. Community RTK Survey Compliance: 1994, 1993, & 1992 (Manufacturing Industries)

1994 Surveys Mailed = 20,719
1993 Surveys Mailed = 19,920
1992 Surveys Mailed = 19,704

1994 Surveys Returned = 19,202
1993 Surveys Returned = 18,193
1992 Surveys Returned = 18,087

1994 Compliance = 91%
1993 Compliance = 91%
1992 Compliance = 92%

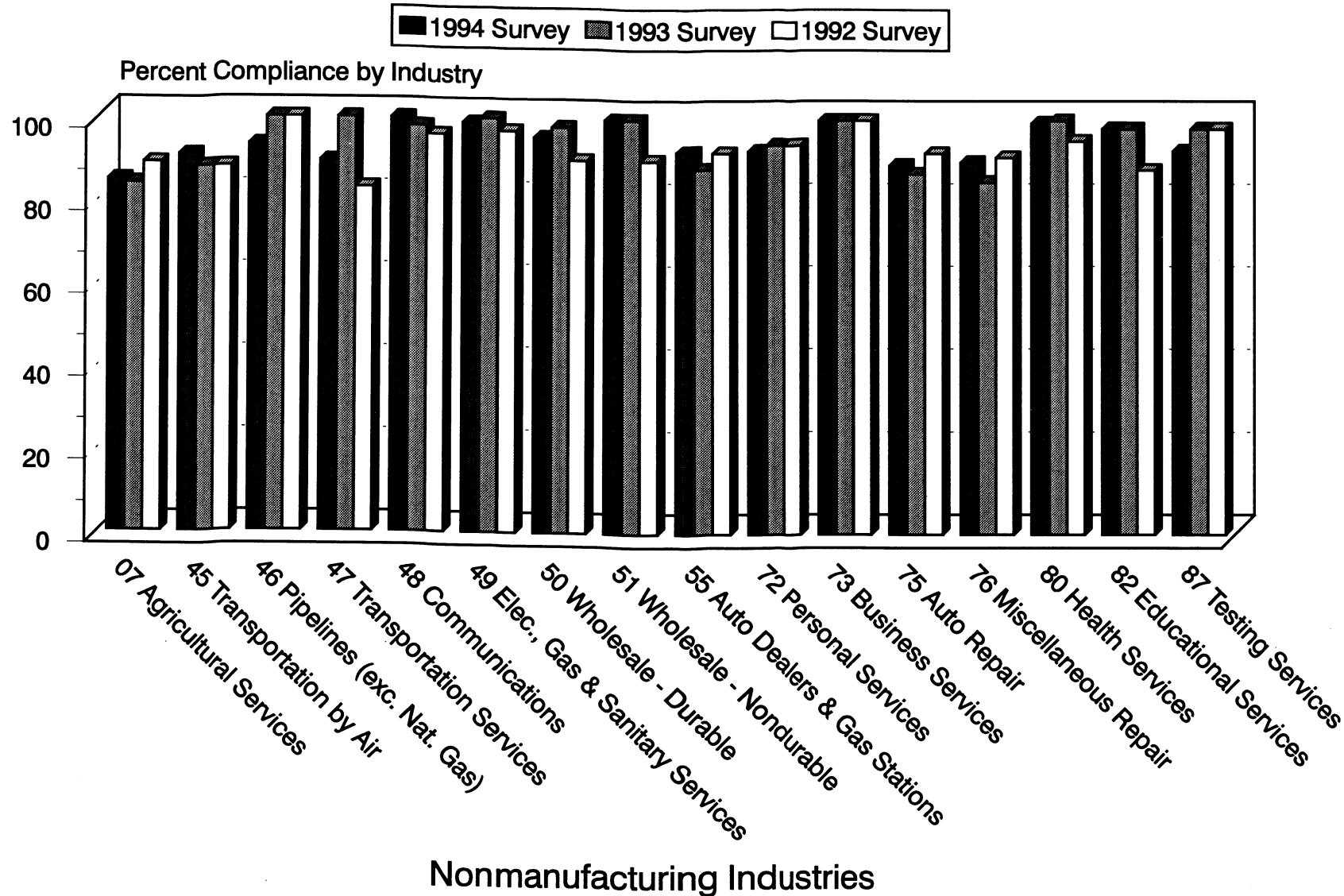
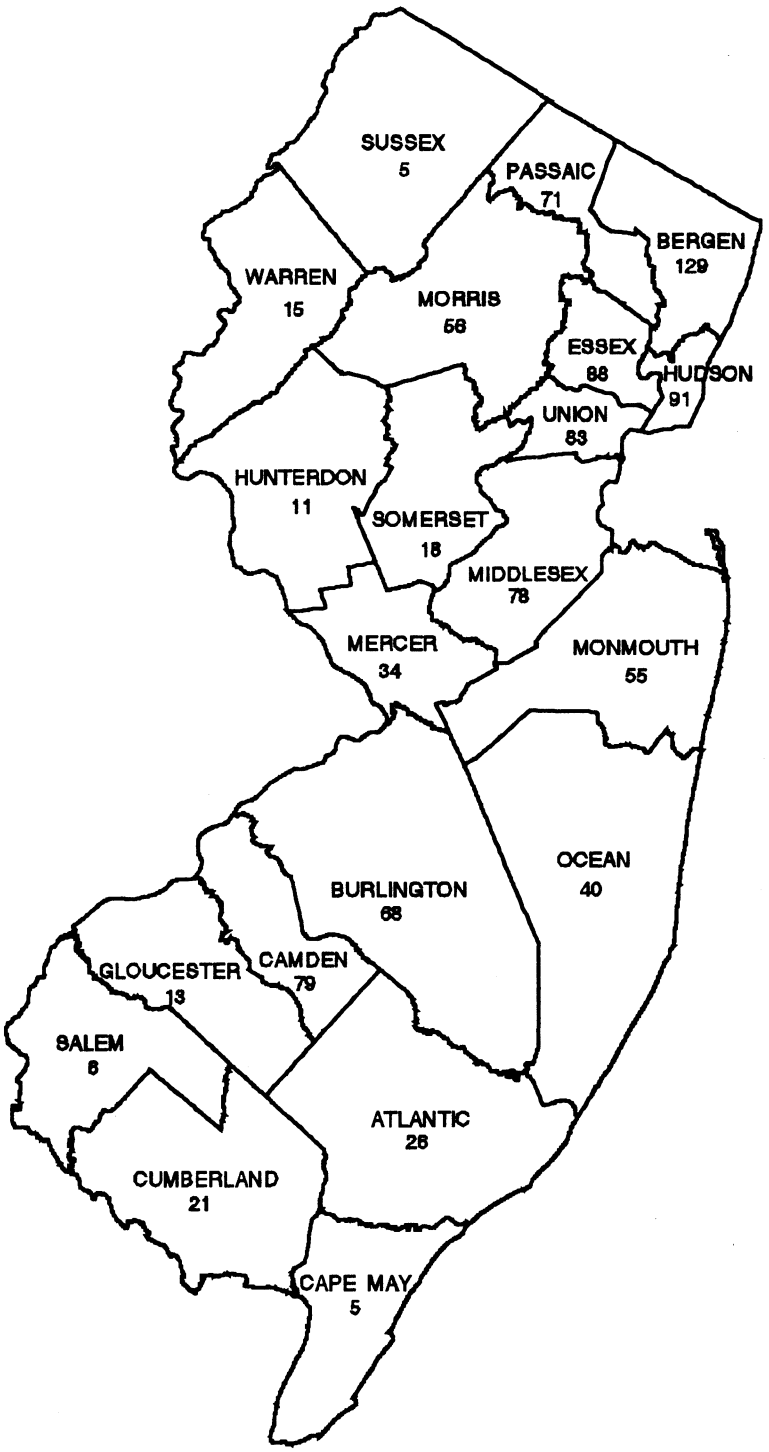
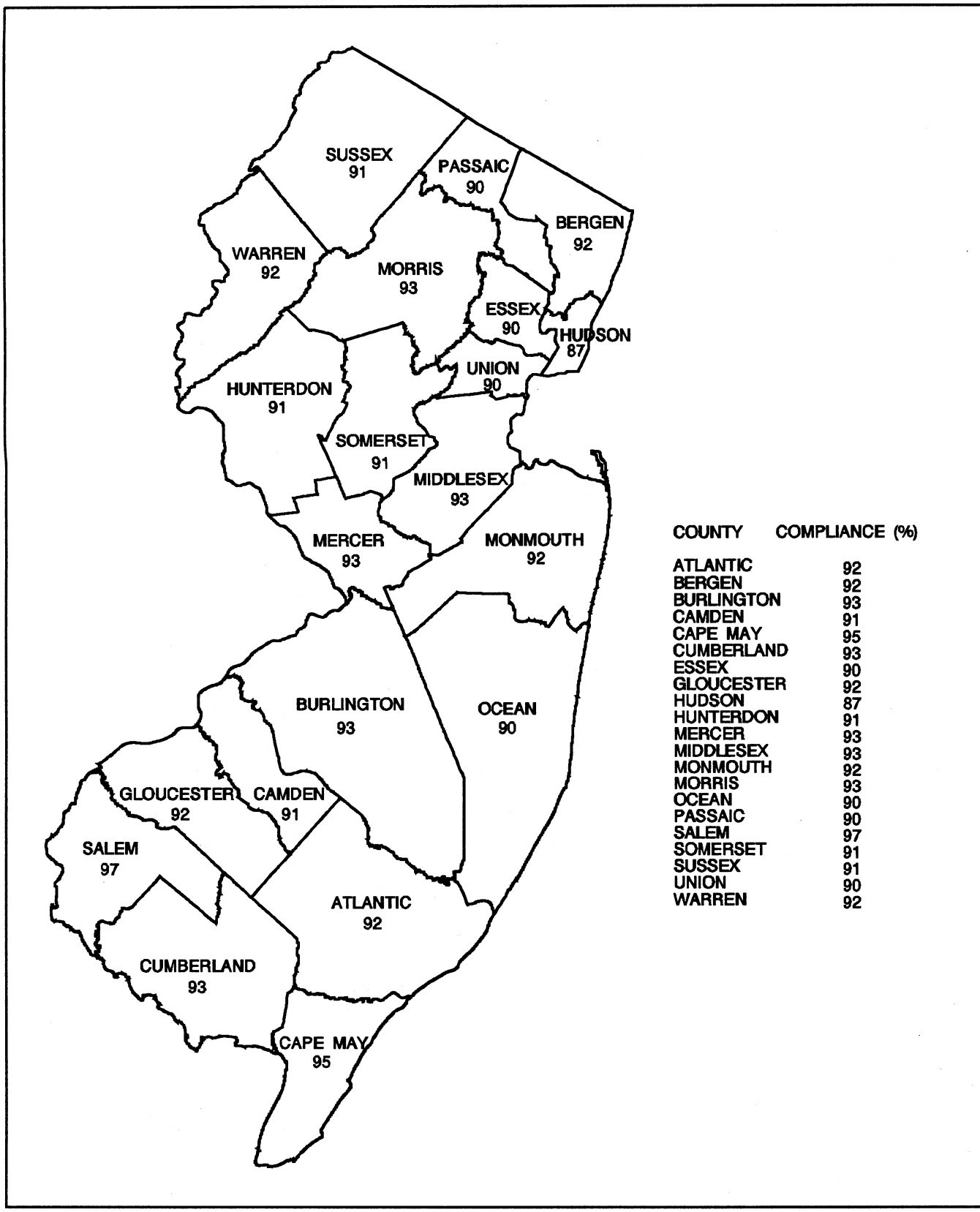


Figure 13. Community RTK Survey Compliance: 1994, 1993, & 1991 (Nonmanufacturing Industries)



COUNTY	NUMBER OF FACILITY AUDITS
ATLANTIC	26
BERGEN	129
BURLINGTON	68
CAMDEN	79
CAPE MAY	5
CUMBERLAND	21
ESSEX	88
GLOUCESTER	13
HUDSON	91
HUNTERDON	11
MERCER	34
MIDDLESEX	78
MONMOUTH	55
MORRIS	56
OCEAN	40
PASSAIC	71
SALEM	6
SOMERSET	18
SUSSEX	5
UNION	83
WARREN	15
TOTAL =	992

Figure 14. Number of Community Right To Know Field Audits Conducted by the DEP in 1995 by County

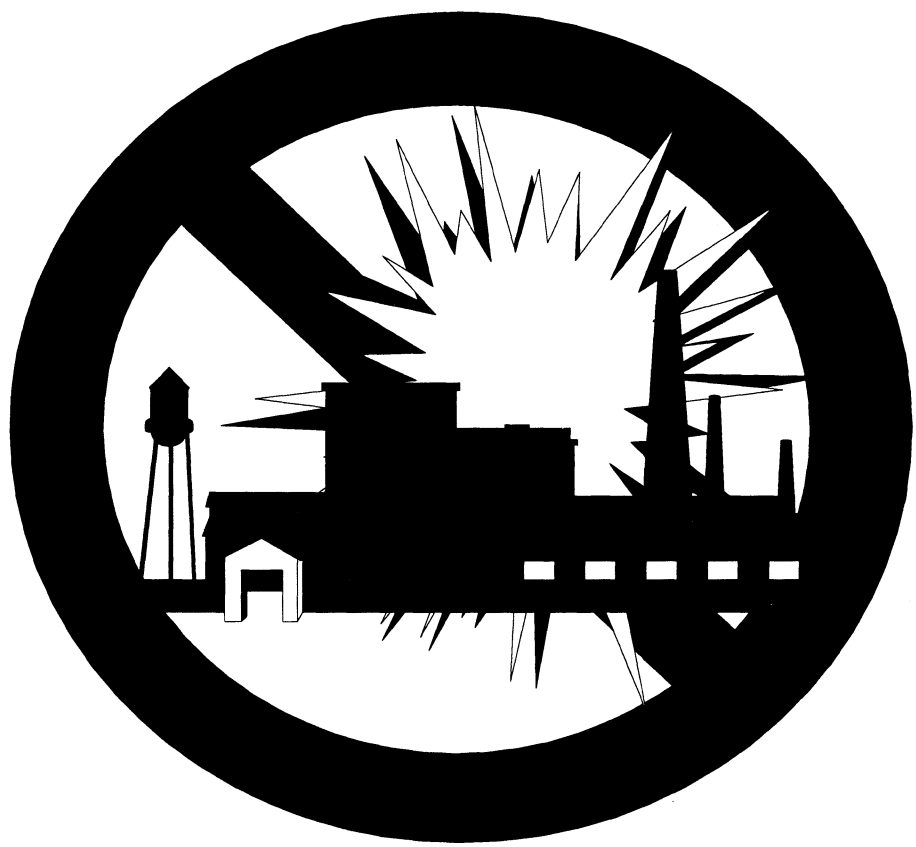


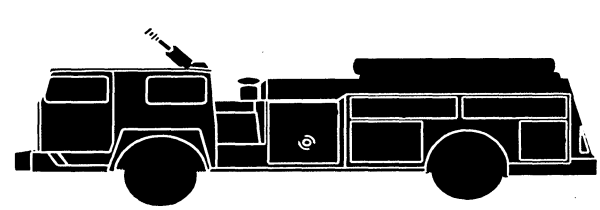
COUNTY	COMPLIANCE (%)
ATLANTIC	92
BERGEN	92
BURLINGTON	93
CAMDEN	91
CAPE MAY	95
CUMBERLAND	93
ESSEX	90
GLOUCESTER	92
HUDSON	87
HUNTERDON	91
MERCER	93
MIDDLESEX	93
MONMOUTH	92
MORRIS	93
OCEAN	90
PASSAIC	90
SALEM	97
SOMERSET	91
SUSSEX	91
UNION	90
WARREN	92

Figure 15. 1994 Community Right To Know Survey Compliance (by percent)

EPCRA SECTIONS 301 - 304

EXTREMELY HAZARDOUS SUBSTANCE PLANNING & NOTIFICATION





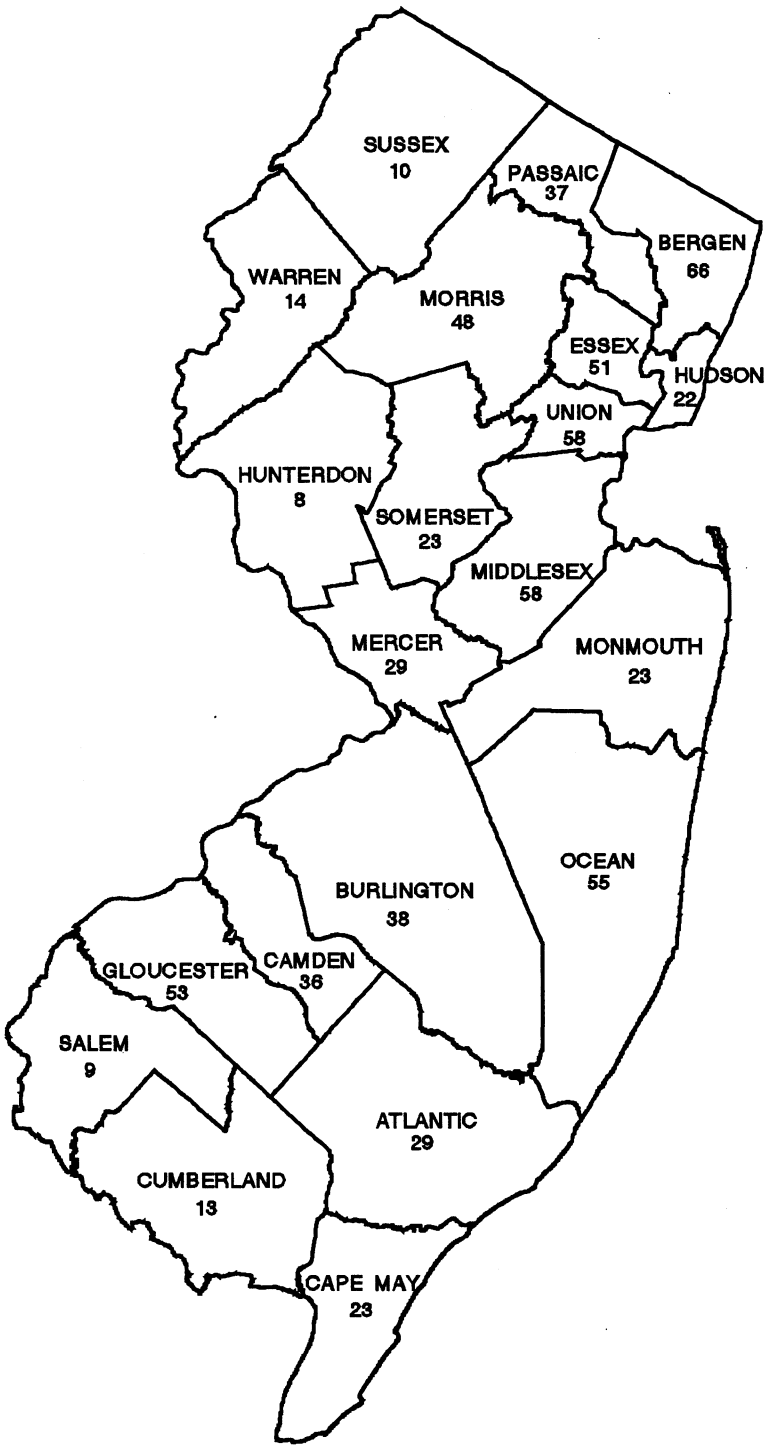
EXTREMELY HAZARDOUS SUBSTANCE PLANNING AND NOTIFICATION

A list of Extremely Hazardous Substances, with associated threshold planning quantities (TPQ) and reportable quantities (RQ), was established by USEPA under Section 302 of the Emergency Planning and Community Right to Know Act of 1986 (EPCRA). This list represents substances which would likely cause serious irreversible health effects if unplanned releases occurred. Under EPCRA, a facility that had an Extremely Hazardous Substance above a threshold planning quantity had to inform the NJDEP and its Local Emergency Planning Committee (LEPC) by May 17, 1987 that it was subject to emergency planning. Subsequent to this date, facilities were required to notify the NJDEP and their LEPCs that they are subject to these requirements within 60 days after the first on-site occurrence of any Extremely Hazardous Substance above the threshold planning quantity.

Local Emergency Planning Committees were established under EPCRA and were required to develop comprehensive emergency response plans for their regions. In New Jersey, every municipality and county is required to maintain an LEPC. The New Jersey Emergency Management Act (New Jersey Statutes Annotated Appendix A:9-30 et seq.) also requires every municipality and county to develop and maintain an Emergency Operations Plan. These plans include all emergency services procedures, including those needed to fulfill EPCRA requirements. To date, approximately 87% of the state's 588 LEPCs have approved plans. An additional 11% are under development or in need of review and resubmission to the State Police Office of Emergency Management. Fewer than 2% have not developed plans. With this level of compliance, less than 1% of the state's population is in an area that does not have an LEPC with an approved plan or one under review.

Under Section 304 of EPCRA, a facility is required to report an unplanned release of any Extremely Hazardous Substance above the reportable quantity to the NJDEP and to its LEPC. This federal requirement is in addition to the state requirement that any unplanned release of any substance must be reported immediately to the NJDEP's hotline.

As of the spring of 1996, there were 701 active facilities in the state that had notified the department that Extremely Hazardous Substances were present at their facilities above the threshold planning quantity, including 627 private sector and 74 public sector facilities. Figure 16 shows the distribution of these facilities by county. An analysis by SIC code is shown in Table 23.



COUNTY	EPCRA 302 FACILITIES
ATLANTIC	29
BERGEN	66
BURLINGTON	38
CAMDEN	36
CAPE MAY	23
CUMBERLAND	13
ESSEX	51
GLOUCESTER	53
HUDSON	22
HUNTERDON	8
MERCER	29
MIDDLESEX	58
MONMOUTH	23
MORRIS	48
OCEAN	55
PASSAIC	37
SALEM	9
SOMERSET	23
SUSSEX	10
UNION	58
WARREN	14
TOTAL =	701

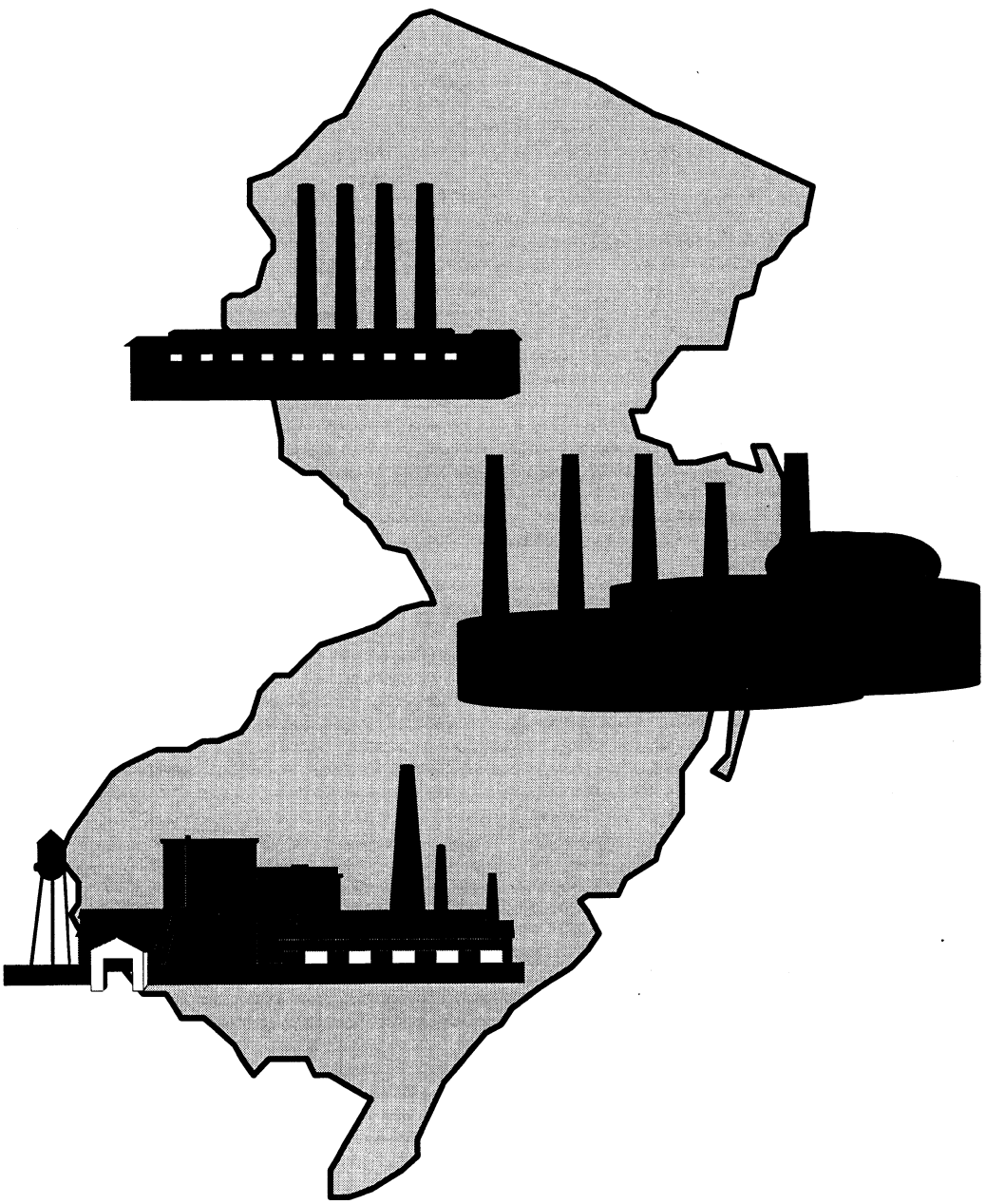
Figure 16. Number of Facilities that have filed EPCRA Section 302 Notifications by County

Table 23. New Jersey's EPCRA Section 302 Facilities by Standard Industrial Classification[1]

SIC	Activity	Total Number of Facilities	Number of Public Sector Facilities
01	Agricultural production - crops	14	
07	Agricultural services	9	
17	Construction - special trade contractors	1	
20	Food & kindred products	18	
22	Textile mill products	4	
23	Apparel & other textile products	4	
24	Lumber & wood products	9	
25	Furniture & fixtures	3	
26	Paper & allied products	6	
27	Printing & publishing	19	
28	Chemicals & allied products	119	
29	Petroleum & coal products	10	
30	Rubber & miscellaneous plastics products	13	
31	Leather & leather products	1	
32	Stone, clay & glass products	18	
33	Primary metal industries	21	
34	Fabricated metal products	49	
35	Machinery, except electrical	19	
36	Electrical & electronic equipment	20	
37	Transportation equipment	4	
38	Instruments & related products	13	
39	Miscellaneous manufacturing industries	6	
40	Railroad transportation	1	1
42	Motor freight transportation & warehousing	6	
47	Transportation services	1	
48	Communications	28	
49	Electric, gas & sanitary services	146	44
50	Wholesale trade - durable goods	10	
51	Wholesale trade - nondurable goods	30	
52	Building materials, hardware, garden supply, & mobile home dealers	3	
53	General merchandise stores	47	
54	Food stores	1	
55	Automotive dealers & gasoline service stations	3	
59	Miscellaneous retail	1	
72	Personal services	1	
73	Business services	4	
75	Automotive repair, services, & parking	1	
76	Miscellaneous repair services	1	
80	Health services	1	
82	Educational services	7	6
87	Engineering, accounting, research, management, & related services	1	
89	Miscellaneous services	2	
91	Executive, legislative, & general government, except finance	21	21
96	Administration of economic programs	1	1
97	National security & international affairs	4	1
		701	74

1. Active facilities as of the Spring of 1996.

EPCRA SECTION 313
TOXIC CHEMICAL RELEASE INVENTORY
FOR 1994



THE 1994 TOXIC CHEMICAL RELEASE INVENTORY

Introduction

The Toxic Chemical Release Inventory (TRI) was established under the federal Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) in Section 313. This section requires that Toxic Chemical Release Inventory Reporting Forms (Form R) be filed by owners and operators of facilities that meet all three of the following criteria:

- the facility's business activity is included in the manufacturing Standard Industrial Classification primary codes 20 through 39 (major groups); and
- the facility has 10 or more full-time employees (i.e. the facility's payroll exceeded 20,000 work-hours in the calendar year); and
- the facility manufactured (defined to include imported) or processed more than 25,000 pounds or otherwise used more than 10,000 pounds of any listed toxic chemical during the calendar year.

Covered facilities are required to provide on the Form R estimated quantities of the following on-site releases and off-site transfers for each chemical meeting the thresholds:

- fugitive air emissions (nonpoint source);
- stack air emissions (point source);
- surface water discharges;
- underground injection;
- on-site land releases (at the facility);
- discharges to publicly owned treatment works (POTW); and
- transfers to other off-site locations for further waste management.

The quantities are estimated amounts of annual on-site releases and off-site transfers from the entire reporting facility. The information presented here is a general summary of the 1994 data based upon information provided by the USEPA, gathered from Form R submissions to the USEPA through early February 1996.

To reiterate important information presented on page 13, there were many changes to the list of reportable substances for reporting year 1994.

- eleven hydrochlorofluorocarbons (HCFCs) and 19 other chemicals, including two chemical categories, classified as "U wastes" under the federal Resource Conservation and Recovery Act (RCRA) were added;
- the reporting qualification for ammonia was changed to "ammonia (includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10 percent of total aqueous ammonia is reportable under this listing);"
- ammonium sulfate (solution) was delisted and is now reported under the ammonia listing;
- the reporting qualification for sulfuric acid was changed from "solution" to "acid aerosol forms only;" and
- acetone, a chemical that appeared regularly in the top 10 for air emissions and off-site transfers in previous annual reports, as well as butyl benzyl phthalate and all copper phthalocyanine compounds that are substituted only with hydrogen and/or chlorine and/or bromine were delisted as it was determined that they did not meet the human health or environmental toxicity criteria established for a chemical to be listed on the EPCRA section 313 list.

Therefore, there were 341 unique chemicals and 22 chemical categories subject to reporting for 1994.

An expansion of the TRI reporting requirements was made under Section 6607 of the federal Pollution Prevention Act of 1990 beginning with the 1991 reporting year. The quantity of a toxic chemical that was transferred off site and subject to recycling or energy recovery became reportable under the heading of "Transfers to Other Off-Site Locations." For each reportable chemical, estimated quantities of chemicals amenable to source reduction were required for the following activities:

- quantity released to the environment;
- quantity used for energy recovery on site;
- quantity used for energy recovery off site;
- quantity recycled on site;
- quantity recycled off site;
- quantity treated on site; and
- quantity treated off site.

Figure 17 presents a summary of the 1994 TRI data for New Jersey. This figure was adapted from the "1994 Toxics Release Inventory, Public Data Release - State Fact Sheets" published by USEPA (document number EPA 745-F-96-001, June 1996). The outline map of New Jersey identifies by triangle (▲) the location of every reporting facility. Reported releases and waste management activities are grouped by on-site releases, on-site waste management activities and off-site transfers for further waste management. Also, the top five chemicals for total on-site releases are listed.

The top 10 New Jersey TRI facilities for total on-site releases and the top 10 facilities for air/water/land releases are found in Table 24, which was also adapted from the USEPA TRI State Fact Sheets. It becomes evident when looking at the two groupings in Table 24 that there is no difference in the facilities listed or their rankings. This is due to the fact that underground injection is not a typical waste disposal method in New Jersey, is not reported by these facilities and, therefore, does not affect the rankings.

New Jersey is one of only two states in the nation that has a state release reporting program in addition to the federal program that collects materials accounting data (the other is Massachusetts). New Jersey's reporting requirements are different from the federal reporting requirements and additional data elements are reported under state requirements; however, the same facilities are required to provide data on the same toxic chemicals reported on Form R, i.e., those manufactured or processed in excess of 25,000 pounds or otherwise used in excess of 10,000 pounds. Further, beginning with reporting year 1994, New Jersey facilities were required to report any listed chemicals that were manufactured or processed in excess of 10,000 pounds on the Release and Pollution Prevention Report in order to meet the requirements of the New Jersey Pollution Prevention Act.

This unique situation permits interesting comparisons of the data reported under the state and federal programs. Table 25 presents a contrast of the 1994 data reported on the federal Form R and the state Release and Pollution Prevention Report (RPPR). One of the differences observed is the number of the reporting facilities and the numbers of each report (i.e., Form R and RPPR) submitted. As a result of New Jersey's 10,000 pound manufacture and process thresholds, more RPPRs were submitted by fewer facilities compared to Form R.

A second difference observed between the RPPR and Form R is the list of top 10 facilities for total on-site releases as presented in Table 11 on page 40 and in Table 24 on page 84. The list of facilities is identical, however, the facility total on-site releases vary for almost every company. New Jersey's requirements have resulted in additional chemicals reported by certain facilities. Therefore, when a facility reported larger total quantities on the Form R (e.g. Table 24 vs. Table 11), a review of the Form R and RPPR was conducted to identify the possible causes of any discrepancy.

The main reasons for the variations are: 1) New Jersey's threshold may require facilities to report more chemicals on the RPPR than on the Form R; 2) the quantities of on-site releases and off-site transfers reported for those chemicals, especially with respect to delisted chemicals or a modified listing for a chemical (such as ammonia, ammonium sulfate and sulfuric acid as previously addressed); 3) the number of facilities complying with the state and federal requirements; and 4) the number of chemicals reported by those facilities. A more detailed explanation of the observed differences can be found in the Release and Pollution Prevention Report section of this report (see page 18).

Toxic Release Inventory Trends

The 1994 data represents the eighth year of TRI reporting under Section 313 of EPCRA. Over the years, there have been numerous changes in the reporting requirements of the program. The reporting thresholds for manufacture and process have been systematically reduced (75,000 pounds in 1987, 50,000 pounds in 1988, and 25,000 pounds for 1989 and thereafter). Chemicals have been added to and deleted from the list of reportable toxic chemicals. Also, qualifiers have been added to reportable chemicals; the most notable were specifying "fibrous forms only" for aluminum oxide, commencing with reporting year 1989, modifying the ammonia listing and changing sulfuric acid form "solution" to "acid aerosol forms only," both of which covered reporting for 1994.

Beginning with the 1991 reporting year, reporting requirements were expanded to include off-site transfers for recycling or energy recovery and the reporting of data relevant to source reduction and recycling activities. Additionally, through USEPA's compliance actions or voluntary submissions by facilities, new forms are received every year from companies that are reporting for any or all of the previous reporting years. Facilities have also been afforded the opportunity to submit revisions to previous years' forms when new information becomes available that indicates that data reported on those previous submissions were incorrect, e.g., reported air releases were too high (low).

Since TRI data are collected annually, they can be used to measure progress in reducing toxic chemical releases and off-site transfers from manufacturing facilities. Figure 18, TRI On-Site Releases, and Figure 19, TRI Off-Site Transfers, present data for reporting years 1988 and 1992-1994. Although 1987 was the first year for TRI reporting, 1988 has been chosen as the baseline year for comparisons because of concerns about the data quality of industry's submissions in the first year. Year-to-year comparisons of the on-site releases and off-site transfers are based on a consistent set of chemicals that have been reported for 1988, 1992, 1993 and 1994. Figures 18 and 19 do not include aluminum oxide, ammonia, sulfuric acid, or any chemicals that have been added to or deleted from the chemical list since 1988. This normalization process results in quantities that will differ from those presented in other sections of this report.

The observations indicate that the trends are in the right direction. The summary of on-site releases (Figure 18) indicates considerable declines over time. Reported toxic chemical releases decreased by more than 13.5% between 1993 and 1994. This is due in large part to reductions in air emissions. Surface water discharges and on-site land disposal have been relatively constant. Off-site transfers (Figure 19) increased by nearly 7.2% from 1993 to 1994, due to increased transfers for recycling, energy recovery and treatment. Since 1988, on-site releases have declined by more than 65%.

The trends illustrate the positive effects to be derived by public disclosure of toxic chemical release reporting by industry. In addition to the reductions noted above, discharges to POTWs have declined from 1988 to 1994 (Figure 19) while off-site transfers for treatment or disposal declined from 1988 to 1992 and have leveled off for 1992-1994. Conversely, off-site transfers for recycling or energy recovery have increased from 1992 to 1994. These management methods (recycling and energy recovery) are higher on the pollution prevention hierarchy than are treatment or disposal, and are, therefore, preferable waste management methods. However, true pollution prevention, that is reducing the use of a toxic chemical per unit of product manufactured and eliminating the generation of the toxic chemical as a waste, is the ideal approach to dealing with toxic chemicals.

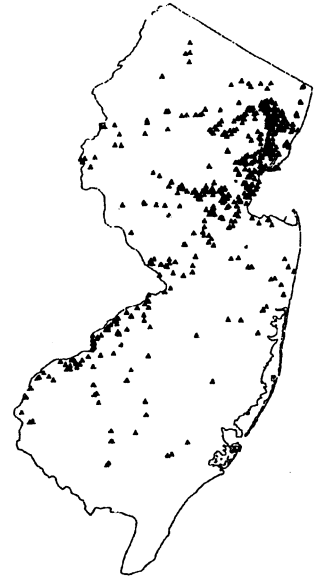
The reduction in the number of facilities and the number of chemicals that are reported, and the total quantities of on-site environmental releases and off-site transfers can be attributed to many factors. They are due, at least in part, to: 1) real efforts by industry to control pollution and to implement pollution prevention measures; 2) industry's efforts to phase out the use of toxic chemicals; 3) chemical delistings and modifications to the reporting requirements for certain chemicals; 4) improvements in the methods to calculate estimates of on-site releases and off-site transfers; and 5) changes in the market demands for certain chemicals or products made with, or incorporating, listed chemicals.

In closing, many facility owners and operators have been encouraged to look for means to reduce the quantities of toxic chemicals generated by and discharged from their operations. Many companies, large and small, have made voluntary commitments to reduce their releases by up to 90% by 1996 (when compared to 1987 or 1988 levels). These positive trends must be analyzed with caution, however. Detailed reviews at the facility and chemical-specific levels are the best method by which real reductions can be verified. Nonetheless, it is apparent that toxic chemical releases and transfers, at least for many of the reporting industries, are on the decline.

1994 TOXICS RELEASE INVENTORY

NEW JERSEY

Population	7,904,000
Total Facilities	673
Total Forms	2,336
National Rank for Total Releases	34
National Rank for Air/Water/Land Releases	33
Transfers into State	
Rank	10
Pounds	59,560,697
Transfers out of State	
Rank	11
Pounds	68,071,568



Reported Releases and Waste Management Activities

	(pounds)
On-site Releases	15,530,597
Air Emissions	14,466,697
Surface Water Discharges	789,245
Underground Injection	5
Releases to Land	274,650
On-site Waste Management	413,204,341
Recycling	56,541,028
Energy Recovery	170,604,266
Treatment	186,059,047
Off-site Transfers for Further Waste Management	134,400,456
Recycling	58,848,809
Energy Recovery	28,587,392
Treatment	11,906,194
Publicly Owned Treatment Works (POTWs)	33,192,402
Disposal	1,865,409
Other Off-site Transfers	250

Top Five Chemicals for Total Releases

Chemical	Air Emissions Pounds	Surface Water Discharges Pounds	Underground Injection Pounds	Releases to Land Pounds	Total Releases Pounds
Methanol	2,047,911	9,459	0	168	2,057,538
Toluene	1,697,335	6,326	0	1,784	1,705,445
Xylene (mixed isomers)	1,341,624	8,624	0	564	1,350,812
Ammonia	776,052	491,626	0	0	1,267,678
Dichloromethane	802,954	0	0	0	802,954

Top Five Chemicals for Air/Water/Land Releases

Chemical	Air Emissions Pounds	Surface Water Discharges Pounds	Releases to Land Pounds	Total Releases Pounds
Methanol	2,047,911	9,459	168	2,057,538
Toluene	1,697,335	6,326	1,784	1,705,445
Xylene (mixed isomers)	1,341,624	8,624	564	1,350,812
Ammonia	776,052	491,626	0	1,267,678
Dichloromethane	802,954	0	0	802,954

Figure 17. 1994 TRI Data Fact Sheet for New Jersey

1994 TOXICS RELEASE INVENTORY

NEW JERSEY

Top Ten Facilities for Total Releases

Facility	City, County	Air Emissions Pounds	Surface Water Discharges Pounds	Underground Injection Pounds	Releases to Land Pounds	Total Releases Pounds
DuPont	Deepwater, Salem	1,186,394	508,117	0	206,905	1,901,416
Meer Corp.	North Bergen, Hudson	1,175,260	0	0	0	1,175,260
Ford Motor Co.	Edison, Middlesex	776,943	0	0	0	776,943
Biocraft Laboratories Inc.	Waldwick, Bergen	521,918	0	0	0	521,918
Bayway Refining Co.	Linden, Union	427,991	18,825	0	0	446,816
Permacel	North Brunswick, Middlesex	401,727	0	0	0	401,727
General Motors Corp.	Linden, Union	394,264	0	0	0	394,264
Coastal Eagle Point Oil Co.	Westville, Gloucester	370,818	11,285	0	0	382,103
American National Can Co.	Piscataway, Middlesex	293,585	0	0	0	293,585
Peerless Tube Co.	Bloomfield, Essex	268,160	0	0	0	268,160

Top Ten Facilities for Air/Water/Land Releases

Facility	City, County	Air Emissions Pounds	Surface Water Discharges Pounds	Releases to Land Pounds	Air/Water/Land Releases Pounds
DuPont	Deepwater, Salem	1,186,394	508,117	206,905	1,901,416
Meer Corp.	North Bergen, Hudson	1,175,260	0	0	1,175,260
Ford Motor Co.	Edison, Middlesex	776,943	0	0	776,943
Biocraft Laboratories Inc.	Waldwick, Bergen	521,918	0	0	521,918
Bayway Refining Co.	Linden, Union	427,991	18,825	0	446,816
Permacel	North Brunswick, Middlesex	401,727	0	0	401,727
General Motors Corp.	Linden, Union	394,264	0	0	394,264
Coastal Eagle Point Oil Co.	Westville, Gloucester	370,818	11,285	0	382,103
American National Can Co.	Piscataway, Middlesex	293,585	0	0	293,585
Peerless Tube Co.	Bloomfield, Essex	268,160	0	0	268,160

For More Information...

State Contact:
(609) 984-3219
Andrew Opperman
Fax (609) 633-7031

EPA Regional Contact:
(908) 906-6890
Nora Lopez
Fax (908) 321-6788

To obtain TRI data use assistance, call TRI User Support Service (TRI-US):
(202) 260-1531 Fax (202) 260-4659

Table 24. 1994 TRI Data Fact Sheet for New Jersey: Top Ten New Jersey Facilities for Total On-Site Releases

Table 25. 1994 Reporting Year Comparison for New Jersey's Facilities Subject to Federal and State Release Reporting Requirements[1]

USEPA Form R vs. NJ Release and Pollution Prevention Report (RPPR)
(releases and transfers are reported in pounds)

	1994 Form R	1994 RPPR
Number of Facilities	**673**	**659**
Number of Forms	**2,336**	**2,470[2]**
On-Site Releases	**15,530,597**	**15,066,479**
Stack Air Emissions	7,694,144	7,655,906
Fugitive Air Emissions	6,772,553	6,433,966
Surface Water Discharges	789,245	774,885
Groundwater Discharges[3]	NA[4]	6
Underground Injection[5]	5[6]	NA
On-Site Land Disposal	274,650	201,716
Off-Site Transfers for Further Waste Management	**134,400,456**	**154,392,250**
POTW Discharges	33,192,402	29,470,659
Off-Site Recycling	58,848,809	87,136,484
Off-Site Energy Recovery	28,587,392	22,961,935
Off-Site Treatment	11,906,194	10,127,361
Off-Site Disposal	1,865,409	4,306,310
Other Off-Site Transfers[7]	250	389,501

Footnotes:

1. Observed differences are the result of: a) New Jersey's 10,000 pound manufacture, process, or otherwise use threshold; b) USEPA's inclusion of Form R submissions through early February 1995 and NJDEP's inclusion of RPPR submissions through March 1995; c) facilities failing to report all chemicals on the RPPR that were reported on the Form R; d) facilities failing to report on-site releases and off-site transfers on one form that were reported on the other; and other reasons addressed on pages 18 and 80-81 of this report.
2. The New Jersey threshold is 10,000 pounds for manufacture, process or otherwise use for all reportable substances once a facility meets the Form R reporting requirements; therefore, a facility may submit additional RPPRs beyond the number of Form Rs submitted.
3. This data element appears on the RPPR but not on the Form R.
4. "NA" means not applicable.
5. This data element appears on the Form R but not on the RPPR.
6. Underground injection is not a typical waste disposal method in New Jersey.
7. Transfers reported with no waste management codes or invalid codes.

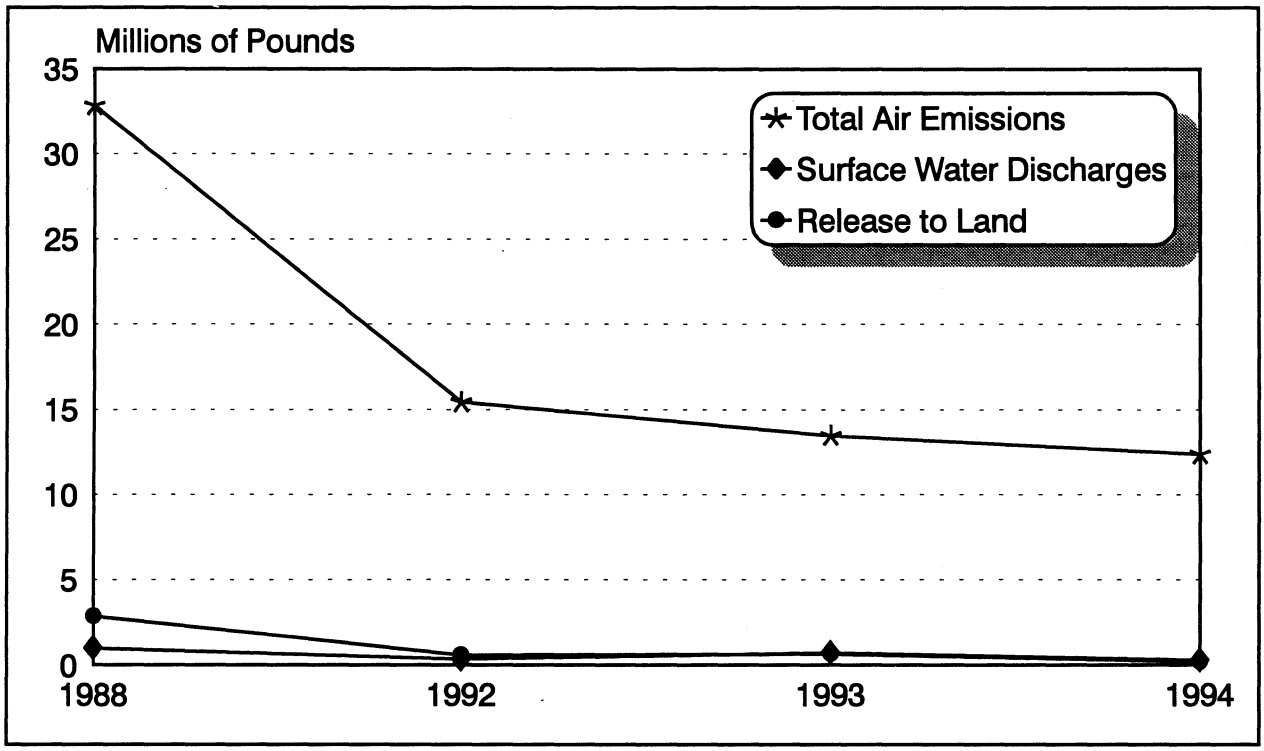


Figure 18. TRI On-Site Releases: 1988, 1992, 1993 and 1994 (all quantities in millions of pounds).*

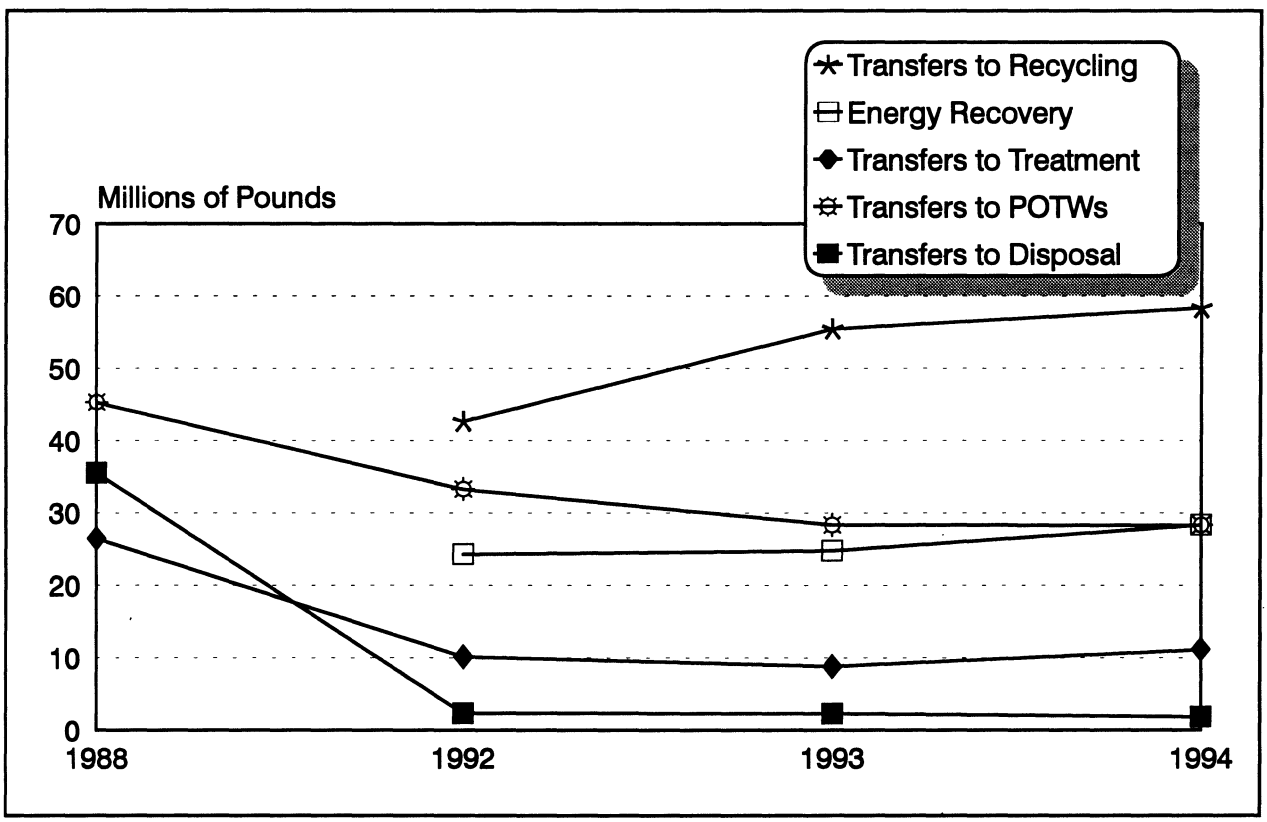


Figure 19. TRI Off-Site Transfers: 1988, 1992, 1993 and 1994 (all quantities in millions of pounds).*

* The data in these figures do not include aluminum oxide, ammonia, sulfuric acid, or any chemicals that have been added to or deleted from the chemical list since 1998.

Appendix A

Standard Industrial Classification Codes: New Jersey Employer Groups And Activities Subject To Hazardous Substances Inventory Reporting

SIC Code	ACTIVITY
07	AGRICULTURAL SERVICES
0782	Lawn and Garden Services (only)
20 - 39	MANUFACTURING ESTABLISHMENTS (Entire Major Groups)
20	FOOD AND KINDRED PRODUCTS
21	TOBACCO MANUFACTURING
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS
24	LUMBER AND WOOD PRODUCTS
25	FURNITURE AND FIXTURES
26	PAPER AND ALLIED PRODUCTS
27	PRINTING AND PUBLISHING
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
30	RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS
31	LEATHER AND LEATHER PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
33	PRIMARY METAL INDUSTRIES
34	FABRICATED METAL PRODUCTS
35	MACHINERY, EXCEPT ELECTRICAL
36	ELECTRICAL AND ELECTRONIC EQUIPMENT
37	TRANSPORTATION EQUIPMENT
38	INSTRUMENTS AND RELATED PRODUCTS
39	MISCELLANEOUS MANUFACTURING INDUSTRIES

SIC Code	ACTIVITY
45	TRANSPORTATION BY AIR
4511	Certificated Air Transportation
(4512)	(Scheduled Air Transport)[1]
(4513)	(Air Courier Services)[1]
4582	Airports and Flying Fields
(4581)	(Airports, Flying Fields, & Airport Terminal Services)[1]
4583	Airport Terminal Services (see 4581)[1]
46	PIPELINES, EXCEPT NATURAL GAS (Entire Major Group)
47	TRANSPORTATION SERVICES
4712	Freight Forwarding
(4731)	(Arrangement of Transportation of Freight and Cargo)[1]
4742	Rental of Railroad Cars, with Care of Lading
(4741)	(Rental of Railroad Cars)[1]
4743	Rental of Railroad Cars, without Care of Lading (see 4741)[1]
4782	Inspection and Weighing
(4785)	(Fixed Facilities, Handling Motor Vehicle Transport, including Inspection and Weighing)[1]
4783	Packing and Crating
4784	Fixed Facilities, Handling Motor Vehicle Transport (see 4785)[1]
4789	Transport Services, n.e.c.[2]
48	COMMUNICATIONS
4811	Telephone Communication (Radio or Wire)
(4812)	(Radiotelephone Communication)[1]
(4813)	(Telephone, except Radiotelephone)[1]
4821	Telegraph Communication (Radio or Wire)
(4822)	(Telegraph Communication (Radio or Wire))[1]
49	ELECTRIC, GAS, AND SANITARY SERVICES (Entire Major Group)

SIC Code	ACTIVITY
50	WHOLESALE TRADE - DURABLE GOODS
5085	Machinery, Equipment, and Supplies - Industrial
5087	Machinery, Equipment, and Supplies - Service Establishments
5093	Miscellaneous Durable Goods - Scraps and Waste
51	WHOLESALE TRADE - NONDURABLE GOODS
5122	Drugs, Drug Proprietaries, and Druggists' Sundries
5161	Chemicals and Allied Products
(5162)	(Plastics Materials, Basic Forms and Shapes)[1]
(5169)	(Chemicals and Allied Products, n.e.c.)[1,2]
5171	Petroleum Bulk Stations and Terminals
5172	Petroleum and Petroleum Product Wholesalers, except Bulk Stations and Terminals
5181	Beer and Ale
5182	Wines and Distilled Alcoholic Beverages
5191	Farm Supplies
5192	Books, Periodicals, and Newspapers
5193	Flowers, Nursery Stock and Florists Supplies
5194	Tobacco and Tobacco Products
5198	Paints, Varnishes, and Supplies
5199	Nondurable Goods, n.e.c.[2]
55	AUTOMOTIVE DEALERS AND GASOLINE SERVICE STATIONS
5511	Motor Vehicle Dealers (New and Used)
5521	Motor Vehicle Dealers (Used only)
5541	Gasoline Service Stations - Retail
72	PERSONAL SERVICES
7216	Dry Cleaning Plants, except Rug Cleaning
7217	Carpet and Upholstery Cleaning
7218	Industrial Launderers
73	BUSINESS SERVICES
7397	Commercial Testing Labs
(8734)	(Testing Labs)

SIC Code	ACTIVITY
75	AUTOMOTIVE REPAIR, SERVICES, AND GARAGES
7531	Top and Body Repair
(7532)	(Top, Body, and Upholstery Repair, and Paint)[1]
7533	Automotive Exhaust System Repair
7534	Tire Retreading and Repair
7535	Paint (see 7532)[1]
7536	Automotive Glass Replacement
7537	Automotive Transmission Repair
7538	General Automotive Repair
7539	Automotive Repair, n.e.c.[2]
76	MISCELLANEOUS REPAIR
7692	Welding Repair
80	HEALTH SERVICES
8062	General Medical and Surgical Hospitals[3]
8063	Psychiatric Hospitals[3]
8069	Specialty Hospitals, except Psychiatric[3]
82	EDUCATIONAL SERVICES
8211	Elementary and Secondary Schools[3]
8221	Colleges, Universities, and Professional Schools[3]
8222	Junior Colleges and Technical Institutes[3]
8249	Vocational Schools, except Vocational Schools n.e.c.[2,3]
91 - 96	PUBLIC ADMINISTRATION
	All State, County, and Local Governments[3]

1. Activity as currently described, "Standard Industrial Classification Manual, Revised," (PB87-100012), National Technical Information Service, Springfield, VA, 1987.

2. n.e.c. means "not elsewhere classified."

3. Public sector employers receive the Right to Know Survey from the NJ Department of Health (NJDOH). It combines the hazardous substances inventory reporting requirements of both NJDEP and NJDOH.

Appendix B

COMMUNITY RIGHT TO KNOW INFORMATION REQUEST FORM

Name _____

Address _____

_____

Phone _____

Date _____

NJ Department of Environmental Protection
Bureau of Chemical Release Information and Prevention
Community Right to Know Program
CN 405
Trenton, NJ 08625-0405

Attention: Bureau Chief

I am interested in obtaining the information listed below. I understand that there are photocopy or computer fees for producing certain types of reports. I further understand that I will be notified of charges exceeding $20.00 before the reports are sent.

I have checked off the types of information I am interested in.

___ 1. Facility Information

Please send me the hazardous substances inventory and TRI data for ...

FACILITY NAME: _____
ADDRESS: _____
CITY: _____ COUNTY: _____

___ 2. Municipality Information

Please send me a list of the names of all facilities subject to the Community Right to Know reporting requirements and located in ...
(Municipality)_____(County)_____

I am interested in the above information because (check all that apply):

___ I am a local official interested in planning.
___ I am an emergency responder interested in being better prepared for hazardous materials incidents in my community.
___ I am a citizen who wishes to be more aware about hazardous substances stored and/or released in my community.
___ Other: _____

Sincerely,

_____

Appendix C

Toxic Chemicals Reference Sheet
Common Uses of Toxic Chemicals and Their Potential Hazards.

The following is presented as a quick-reference summary of information for the toxic chemicals presented in Tables 6 through 17 as "Largest Total Quantities." It is not a detailed discussion on the uses of and/or potential hazards posed by the chemicals. The reader should consult chemical or toxicology reference materials when there is interest in knowing more about any or all of the substances presented in this report. The New Jersey Department of Health - Right to Know Program has prepared a series of "Hazardous Substance Fact Sheets" for most of the following toxic chemicals as well as a large number of others. These fact sheets are available through the NJ Department of Health, Right to Know Program, CN-368, Trenton, NJ 08625-0368.

Ammonia: Used in making fertilizers, explosives, plastics, dyes and textiles. Hazard: moderately flammable; inhalation may irritate lungs; can irritate eyes, nose, mouth and throat; exposure to concentrated fumes can be fatal.

Ammonium nitrate: Used in making fertilizers, herbicides, insecticides and explosives. Hazard: powerful oxidizer and allergen, flammable by spontaneous chemical reaction; can explode under confinement and high temperature.

Antimony and compounds: Used in manufacture of alloys, enamels, rubber compounds, matches, fireworks; catalysts; a mordant in the dyeing and printing of fabrics or leather. Hazard: toxic as a fume or dust; most compounds are poisons by ingestion, inhalation and intraperitoneal (injection) routes; can irritate eyes, nose, throat and skin.

Benzyl chloride: Used in dyes, intermediates, pharmaceuticals, synthetic tannins and photographic developers. Hazard: intensely irritating to eyes and skin; poison by inhalation; moderately toxic by ingestion and subcutaneous routes.

n-Butyl alcohol: Solvent for fats, resins, waxes, gums, shellac and varnish; also in manufacture of rayon, lacquers, detergents and hydraulic fluids. Hazard: flammable; toxic by prolonged inhalation; can irritate eyes, nose, throat and skin.

sec-Butyl alcohol: A solvent, used in paint removers and cleaners; used in chemical synthesis. Hazard: flammable; mildly toxic by ingestion, toxic on prolonged inhalation; mutagenic data; irritant to eyes and skin.

Chlorine: Widely used ingredient in disinfectants, cleaners and other chemicals; in waste water treatment; and in publicly owned treatment works. Hazard: extremely poisonous; moderately toxic and very irritating by inhalation; can cause respiratory problems in small doses.

Chloromethane: Used in low temperature polymerization, a refrigerant, methylating agent in organic synthesis, herbicide. Hazard: mildly toxic by inhalation; dangerous fire hazard when exposed to heat, flame or powerful oxidizers.

Chromium and compounds: Used in alloying and as a plating element on metal and plastic substrates for corrosion resistance. Hazard: irritating and corrosive effect on tissue; chromium is a human poison and the powder explodes spontaneously in air. Hexavalent compounds are more toxic than the trivalent compounds.

Chlorodifluoromethane (HCFC-22 or Freon 22): Used as a refrigerant, an aerosol propellant, and a low temperature solvent. Hazard: mildly toxic by inhalation; asphyxiant in high concentrations; can irritate the eyes, throat and skin.

2-Chloro-1,1,2,2-tetrafluoroethane (HCFC-124): Used as a refrigerant and as a raw material for other refrigerants. Hazard: can irritate the eyes and skin; contact with the liquid may cause frostbite of the eyes and skin.

Cobalt and compounds: Used in steel alloys and jet engines, in nuclear technology and in cemented carbide abrasives and tools; in cobalt compound synthesis; electroplating; ceramics; lamp filaments, and more. Hazard: Dust is flammable and toxic by inhalation. Can irritate eyes, nose, throat and lungs. Some isotopes of cobalt are radioactive.

Copper and compounds: Used in electrical wiring, plumbing, compounds used in fungicides, pesticides, electroplating, paint pigments and catalysts. Hazard: irritants; some compounds highly toxic; degree of toxicity dependent on compound, exposure and method of entry into the body.

1,2-Dibromoethane: Used as a grain fumigant, general solvent and in waterproofing preparations. Hazard: toxic by inhalation, ingestion, and skin absorption; is a carcinogen; it may damage the developing fetus and the male and female reproductive systems; strong irritant to eyes and skin.

Dichlorobenzenes: Solvents used in dry cleaning, as a degreasing agent, used in production of fumigants, insecticides and dyes. Hazard: skin, eye, throat and lung irritants; moderately toxic by inhalation; inhalation may cause headaches and nausea; emits toxic fumes when heated to decomposition; experimental mutagenic, carcinogenic and teratogenic data.

Dichloromethane: Industrial solvent and paint stripper; in aerosol and pesticide products; used in photographic film production, and in food, furniture and plastics processing. Hazard: carcinogen; lung irritant; inhalation can cause headaches, fatigue and "drunk behavior."

Dichlorotetrafluoroethane: Used as a solvent, refrigerant and air conditioner and in fire extinguishers. Hazard: Moderately toxic by inhalation; irritant; an asphyxiant.

Di(2-ethylhexyl) phthalate: Used as a plasticizer. Hazard: suspected human carcinogen and experimental teratogen; may damage the testes; mild skin and eye irritant; prolonged exposure may affect the kidneys and liver.

Dinitrobenzenes (m, o & p isomers): Used in organic synthesis, dyes. Hazard: poison by ingestion, emits toxic fumes when heated to decomposition.

Ethyl benzene: A solvent, intermediate in the production of styrene. Hazard: moderately toxic by inhalation and intraperitoneal routes; an eye and skin irritant.

Ethylene glycol: In anti-freeze, paints, laminates, auto brake fluids, ink, tobacco and wood stains, and used to de-ice aircraft wings. Hazard: teratogen; highly toxic by ingestion or inhalation.

Freon 113: Common solvent used for electronic components; refrigerant. Hazard: depletes Earth's ozone layer; can irritate eyes, nose, throat and skin; toxic effects by inhalation.

Glycol ethers: Solvents. Hazard: toxic by inhalation, ingestion or skin absorption; irritating to eyes, nose, throat and skin.

Hydrochloric acid: Metal cleaning and pickling, food processing and general cleaners. Hazard: very corrosive, toxic by ingestion or inhalation; can irritate the mouth, nose and throat.

Lead and compounds: In batteries, gasoline additives, ammunition, piping and radiation shielding. Hazard: poison by ingestion; can cause brain damage, particularly in children; suspected carcinogen of the lungs and kidneys.

Manganese and compounds: In aluminum production, steel making, metal purification and dry cell batteries. Compounds used for varnishes, fertilizers, food additives. Hazard: manganese dust is flammable and moderately explosive; toxic by inhalation.

Methanol: Solvent, cleaner and fuel. Hazard: highly flammable; ingestion can cause blindness; mildly toxic by inhalation.

Methyl tert-butyl ether: Used as an octane booster in gasolines, in making other chemicals, and in medicine to dissolve gall stones. Hazard: highly flammable and a fire hazard; can irritate the eyes, skin, nose, throat and lungs.

Methyl ethyl ketone: Solvent in making plastics, textiles, paint and paint removers and adhesives. Hazard: flammable, explosive; toxic by inhalation; a strong irritant; moderately toxic by ingestion.

Methyl isobutyl ketone: Solvent for paints, varnishes, nitrocellulose lacquers, gums and resins. Hazard: flammable; poison by intraperitoneal route; moderately toxic by ingestion; mildly toxic by inhalation; very irritating to skin, eyes and mucous membranes; narcotic in high concentrations; dangerous fire hazard when exposed to heat, flame or oxidizers.

Monochloropentafluoroethane (CFC-115): Used as a refrigerant and dielectric gas; was used as a propellant in spray cans. Hazard: mildly toxic by inhalation; can irritate the eyes and skin; contact with the liquid may cause frostbite of the eyes and skin.

Naphthalene: Used in making dyes, explosives, plastics, lubricants, and as a moth repellent (the last use is decreasing due to the introduction of chlorinated compounds). Hazard: human poison by ingestion and possibly other routes; experimental tumorigenic and reproductive effects; an eye and skin irritant.

Nitric acid: Used in making fertilizers, dyes, explosives, metallurgy and etching steel. Hazard: corrosive; powerful oxidizer; flammable by chemical reaction with reducing agents; produces toxic fumes when heated to decomposition; corrosive to eyes, skin, mucous membranes and teeth; experimental teratogen; human poison; delayed pulmonary edema.

Phenol: Widely used for disinfectants, pharmaceuticals and paints; also used to refine lubricating oils. Hazard: mutagen; human poison by ingestion; toxic if inhaled or through skin contact; a severe eye and skin irritant.

p-Phenylenediamine: Used as an azo dye intermediate, photographic developing agent, photochemical measurements; intermediate in manufacture of antioxidants and accelerators for rubber; dyeing hair and fur. Hazard: toxic by ingestion and inhalation, strong irritant to skin.

Phosphoric acid: Used in fertilizers, soaps and detergents, inorganic phosphates, pickling and rust-proofing metals, pharmaceuticals, animal feeds and more. Hazard: toxic by ingestion and inhalation; a corrosive chemical and contact with the liquid can severely burn the skin and eyes; can irritate the eyes, nose, throat lungs and skin.

Tetrachloroethylene: Used in dry cleaning and metal degreasing. Hazard: a carcinogen; may damage the developing fetus; severe liver and kidney damage can occur.

Toluene: Solvent for perfumes, medicines, dyes, explosives, detergents, aviation gasoline and other chemicals. Hazard: highly flammable and explosive; toxic by ingestion, inhalation, skin contact.

1,1,1-Trichloroethane: Solvent for cleaning precision instruments; also in pesticides and textiles. Hazard: suspected carcinogen; irritating to eyes and skin; moderately toxic by ingestion, inhalation and skin contact.

Trichloroethylene: For cleaning electronic parts and diluting paints; also used in degreasers and fumigants; aerospace industries use it to flush liquid oxygen. Hazard: carcinogen; mildly toxic by ingestion and inhalation.

1,2,4-Trimethylbenzene: Used in the manufacture of dyes and pharmaceuticals. Hazard: moderately toxic by intraperitoneal route; mildly toxic by inhalation; can cause central nervous system depression, anemia and bronchitis; flammable when exposed to heat, flame or oxidizers.

Xylenes: Used as solvents and in making drugs, dyes, insecticides and gasoline. Hazard: flammable; mildly toxic by ingestion and inhalation.

Zinc and compounds: Used as a coating on iron and steel, in making brass metal alloys, car parts, electroplating, batteries, electrical products, paints and fungicides. Hazard: zinc dust is flammable and a human skin irritant.

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Glossary of Acronyms and Terms used in the Annual Report

Carcinogen	Able to produce malignant tumor growth. Operationally, most benign tumors are usually included also.
CAS	Chemical Abstracts Service
CRTK	Community Right to Know
DEQ-094	Community Right to Know Survey
DEQ-114	Release and Pollution Prevention Report
EHS	Environmental Hazardous Substance
EPCRA	Emergency Planning and Community Right to Know Act of 1986 (also known as Title III of SARA)
FORM R	Toxic Chemical Release Inventory Reporting Form, USEPA
FTS	Facility Tracking System
Intraperitoneal	Within the membrane surrounding the organs of the abdominal cavity; refers to injection.
LEPC	Local Emergency Planning Committee
Mutagen	Able to cause a permanent change in the structure of DNA.
NJDEP	New Jersey Department of Environmental Protection
NJDOH	New Jersey Department of Health
NJEIN	New Jersey Employer Identification Number
POTW	Publicly Owned Treatment Works
RPPR	Release and Pollution Prevention Report
RQ	Reportable Quantity
RTKPAS	Right To Know Public Access System
SARA	Superfund Amendments and Reauthorization Act of 1986
SIC	Standard Industrial Classification
Teratogen	Able to cause structural or functional defects during the development of an organism.
Title III	Emergency Planning and Community Right to Know Act of 1986
TPQ	Threshold Planning Quantity
TRI	Toxic Chemical Release Inventory
USEPA	United States Environmental Protection Agency
W&CRTK	Worker and Community Right to Know

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