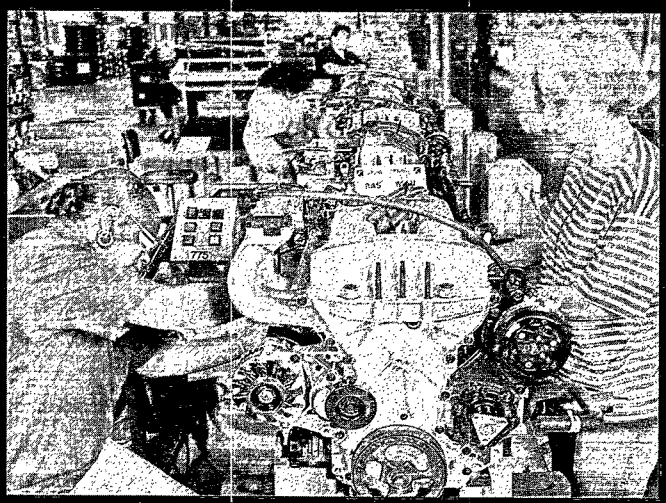
United States
Environmental Protection
Agency

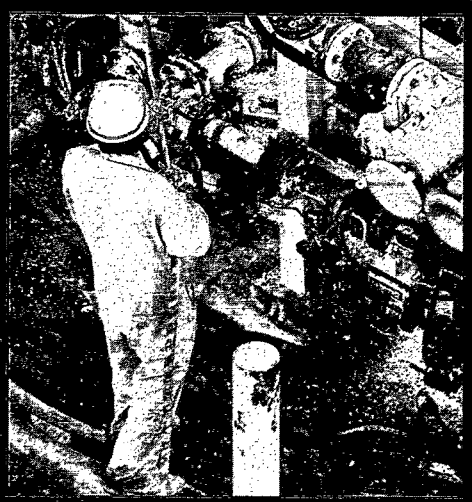
Enforcement And
Compliance Assurance
(2223A)

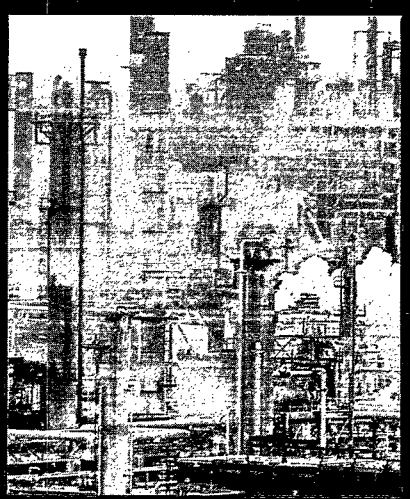
EPA 310-R-97-010
May 1998

EPA

Sector Notebook Data Refresh - 1997







SECTOR EPA 28 NOTEBOOKS

EPA Office Of Compliance Sector Notebook Project

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 18 1997

THE ADMINISTRATOR

Message from the Administrator

Since EPA's founding over 25 years ago, our nation has made tremendous progress in protecting public health and our environment while promoting economic prosperity. Businesses as large as iron and steel plants and those as small as the dry cleaner on the corner have worked with EPA to find ways to operate cleaner, cheaper and smarter. As a result, we no longer have rivers catching fire. Our skies are clearer. American environmental technology and expertise are in demand around the world.

The Clinton Administration recognizes that to continue this progress, we must move beyond the pollutant-by-pollutant approaches of the past to comprehensive, facility-wide approaches for the future. Industry by industry and community by community, we must build a new generation of environmental protection.

The Environmental Protection Agency has undertaken its Sector Notebook Project to compile, for major industries, information about environmental problems and solutions, case studies and tips about complying with regulations. We called on industry leaders, state regulators, and EPA staff with many years of experience in these industries and with their unique environmental issues. Together with an extensive series covering other industries, the notebook you hold in your hand is the result.

These notebooks will help business managers to understand better their regulatory requirements, and learn more about how others in their industry have achieved regulatory compliance and the innovative methods some have found to prevent pollution in the first instance. These notebooks will give useful information to state regulatory agencies moving toward industry-based programs. Across EPA we will use this manual to better integrate our programs and improve our compliance assistance efforts.

I encourage you to use this notebook to evaluate and improve the way that we together achieve our important environmental protection goals. I am confident that these notebooks will help us to move forward in ensuring that -- in industry after industry, community after community -- environmental protection and economic prosperity go hand in hand.

Carol M. Browner

EPA/310-R-97-010

EPA Office of Compliance Sector Notebook Project:

Sector Notebook Data Refresh - 1997

Most current data available through 8/97

May 1998

Office of Compliance
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
401 M St., SW
Washington, DC 20460

This report is an auxiliary part of the Sector Notebook Series, which is being published by the U.S. Environmental Protection Agency (EPA). The Notebook Series provides information of general interest regarding environmental issues associated with specific industrial sectors. The documents were developed under contract by Abt Associates (Cambridge, MA), Science Applications International Corporation (McLean, VA), and Booz-Allen & Hamilton, Inc. (McLean, VA). This publication may be purchased from the Superintendent of Documents, U.S. Government Printing Office. A listing of available Sector Notebooks and document numbers is included on the following page. For the most up to date list and contact person visit the notebook website mentioned below.

All telephone orders should be directed to:

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Complimentary volumes are available to certain groups or subscribers, such as public and academic libraries, Federal, State, and local governments, and the media from EPA's National Center for Environmental Publications and Information at (800) 490-9198. When ordering use the document publication numbers on page iv. For further information, and for answers to questions pertaining to these documents, please refer to the contact names and numbers provided within this volume.

Electronic versions of all Sector Notebooks are available via Internet on the Enviroene World Wide Web at **http://www.epa.gov/oeca/sector/index.html**. Enviro$ense is a free, public, environmental exchange system operated by EPA's Office of Enforcement and Compliance Assurance and Office of Research and Development. The Network allows regulators, the regulated community, technical experts, and the general public to share information regarding: pollution prevention and innovative technologies; environmental enforcement and compliance assistance; laws, executive orders, regulations, and policies; points of contact for services and equipment; and other related topics. The Network welcomes receipt of environmental messages, information, and data from any public or private person or organization. To access this Notebook through the Web, set your web browser to the aforementioned web address, and select the desired Notebook; or point and click your way there as follows:

1) set your browser to our primary web address: **http://www.epa.gov/oeca**;
2) select **"Industry and Govt. Sectors"**;
3) select **"EPA Sector Notebooks"**; and
4) select the desired sector and file format.

Direct technical questions to the "Feedback" button on the bottom of the web page.

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Sector Notebook Contacts

The Sector Notebooks were developed by the EPA's Office of Compliance. Questions relating to the Sector Notebook Project can be directed to:

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US EPA Office of Compliance
401 M St., SW (2223-A)
Washington, DC 20460
(202) 564-7017

Questions and comments regarding the individual documents can be directed to the appropriate specialists listed below. However, contacts are subject to change. If difficulties arise in contacting the specialist listed below, please consult the web site for the updated list.

Publication Number	Industry	Contact	Phone (202)
EPA/310-R-95-001.	Dry Cleaning Industry	Joyce Chandler	564-7073
EPA/310-R-95-002.	Electronics and Computer Industry*	Steve Hoover	564-7007
EPA/310-R-95-003.	Wood Furniture and Fixtures Industry	Bob Marshall	564-7021
EPA/310-R-95-004.	Inorganic Chemical Industry*	Walter DeRieux	564-7067
EPA/310-R-95-005.	Iron and Steel Industry	Maria Malave	564-7027
EPA/310-R-95-006.	Lumber and Wood Products Industry	Seth Heminway	564-7017
EPA/310-R-95-007.	Fabricated Metal Products Industry*	Scott Throwe	564-7013
EPA/310-R-95-008.	Metal Mining Industry	Jane Engert	564-5021
EPA/310-R-95-009.	Motor Vehicle Assembly Industry	Anthony Raia	564-6045
EPA/310-R-95-010.	Nonferrous Metals Industry	Jane Engert	564-5021
EPA/310-R-95-011.	Non-Fuel, Non-Metal Mining Industry	Rob Lischinsky	564-6045
EPA/310-R-95-012.	Organic Chemical Industry*	Walter DeRieux	564-7067
EPA/310-R-95-013.	Petroleum Refining Industry	Tom Ripp	564-7003
EPA/310-R-95-014.	Printing Industry	Ginger Gotliffe	564-7072
EPA/310-R-95-015.	Pulp and Paper Industry	Seth Heminway	564-7017
EPA/310-R-95-016.	Rubber and Plastic Industry	Maria Malave	564-7027
EPA/310-R-95-017.	Stone, Clay, Glass, and Concrete Industry	Scott Throwe	564-7013
EPA/310-R-95-018.	Transportation Equipment Cleaning Ind.	Virginia Lathrop	564-7057
EPA/310-R-97-001.	**Air Transportation Industry**	Virginia Lathrop	564-7057
EPA/310-R-97-002.	**Ground Transportation Industry**	Virginia Lathrop	564-7057
EPA/310-R-97-003.	**Water Transportation Industry**	Virginia Lathrop	564-7057
EPA/310-R-97-004.	**Metal Casting Industry**	Jane Engert	564-5021
EPA/310-R-97-005.	**Pharmaceuticals Industry**	Emily Chow	564-7071
EPA/310-R-97-006.	**Plastic Resin and Man-made Fiber Ind.**	Sally Sasnett	564-7074
EPA/310-R-97-007.	**Fossil Fuel Electric Power Generation**	Rafael Sanchez	564-7028
EPA/310-R-97-008.	**Shipbuilding and Repair Industry**	Anthony Raia	564-6045
EPA/310-R-97-009.	**Textile Industry**	Belinda Breidenbach	564-7022
EPA/310-R-97-010.	**Sector Notebook Data Refresh-1997**	Seth Heminway	564-7017

*Spanish translation available on the web.
Bolded titles were newly published in 1997. All other titles were published in 1995.

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LIST OF ACRONYMS

AFS - AIRS Facility Subsystem (CAA database)
AIRS - Aerometric Information Retrieval System (CAA database)
CAA - Clean Air Act
CERCLA - Comprehensive Environmental Response, Compensation and Liability Act (Superfund)
CERCLIS - CERCLA Information System
CFCs - Chlorofluorocarbons
CO - Carbon Monoxide
CWA - Clean Water Act
D&B - Dun and Bradstreet Marketing Index
EPA - United States Environmental Protection Agency
EPCRA - Emergency Planning and Community Right-to-Know Act
FIFRA - Federal Insecticide, Fungicide, and Rodenticide Act
FINDS - Facility Indexing System
HAPs - Hazardous Air Pollutants (CAA)
HSDB - Hazardous Substances Data Bank
IDEA - Integrated Data for Enforcement Analysis
NAAQS - National Ambient Air Quality Standards (CAA)
NCDB - National Compliance Database (for TSCA, FIFRA, EPCRA)
NESHAP - National Emission Standards for Hazardous Air Pollutants
NOV - Notice of Violation
NO_X - Nitrogen Oxide
NPDES - National Pollution Discharge Elimination System (CWA)
NPL - National Priorities List (CERCLA)
NSPS - New Source Performance Standards (CAA)
OAR - Office of Air and Radiation
OECA - Office of Enforcement and Compliance Assurance
OPA - Oil Pollution Act
OPPTS - Office of Prevention, Pesticides, and Toxic Substances
OSHA - Occupational Safety and Health Administration
OSW - Office of Solid Waste
OSWER - Office of Solid Waste and Emergency Response
OW - Office of Water
P2 - Pollution Prevention
PCS - Permit Compliance System (CWA Database)
POTW - Publicly Owned Treatments Works
PPA - Pollution Prevention Act
RCRA - Resource Conservation and Recovery Act
RCRIS - RCRA Information System
SARA - Superfund Amendments and Reauthorization Act
SDWA - Safe Drinking Water Act
SEPs - Supplemental Environmental Projects

SIC -	Standard Industrial Classification
SO_X -	Sulfur Oxides
TRI -	Toxics Release Inventory
TRIS -	Toxics Release Inventory System
TCRIS -	Toxic Chemical Release Inventory System
TSCA -	Toxic Substances Control Act
UIC -	Underground Injection Control (SDWA)
UST -	Underground Storage Tanks (RCRA)
VOCs -	Volatile Organic Compounds

SECTOR NOTEBOOK DATA REFRESH - 1997

I. INTRODUCTION TO THE SECTOR NOTEBOOK PROJECT

Environmental policies based upon comprehensive analysis of air, water and land pollution (such as economic sector, and community-based approaches) are becoming an important supplement to traditional single-media approaches to environmental protection. Environmental regulatory agencies are beginning to embrace comprehensive, multi-statute solutions to facility permitting, compliance assurance, education/outreach, research, and regulatory development issues. The central concepts driving the new policy direction are that pollutant releases to each environmental medium (air, water and land) affect each other, and that environmental strategies must actively identify and address these interrelationships by designing policies for the "whole" facility. One way to achieve a whole facility focus is to design environmental policies for similar industrial facilities. By doing so, environmental concerns that are common to the manufacturing of similar products can be addressed in a comprehensive manner. Recognition of the need to develop the industrial "sector-based" approach within the EPA Office of Compliance led to the creation of the Sector Notebook Series.

The Sector Notebook Project was initiated by the Office of Compliance within the Office of Enforcement and Compliance Assurance (OECA) to provide its staff and managers with summary information on specific industrial sectors. As other EPA offices, states, the regulated community, environmental groups, and the public became interested in this project, the scope of the original project was expanded. The ability to design comprehensive, common sense environmental protection measures for specific industries is dependent on knowledge of several interrelated topics. For the purposes of this project, the key elements chosen for inclusion are: general industry information (economic and geographic); a description of industrial processes; pollution outputs; pollution prevention opportunities; Federal statutory and regulatory framework; compliance history; and a description of partnerships that have been formed between regulatory agencies, the regulated community and the public.

Industry sectors profiled in the Sector Notebook Project are defined in terms of the Standard Industrial Classification (SIC) System codes (as revised in 1987) which were established by the Office of Management and Budget (OMB) to track the flow of goods and services within the economy. SIC codes associated with each of the sectors included in this document can be found in the key at the bottom of page 5. More detailed descriptions of the scope of each industry sector can be found in Section II.A. of each Sector Notebook. OMB is in the process of changing the SIC code system to a system based on similar production processes called the North American

Industrial Classification System (NAICS). The 1987 SIC codes and the new NAICS codes can be accessed and cross-referenced at www.census.gov/naics.

Purpose of the Data Refresh

The first set of 18 Sector Notebooks were published in 1995. Within a year over 45,000 copies were distributed and significant interest was expressed for notebooks covering additional industry sectors. To meet this demand, a second set of Sector Notebooks was published in 1997 profiling additional industry sectors. More sector notebooks are also under development and will be available by early 1999. Check the Notebook website for the most up to date material (see p.ii for web address).

Much of the Toxic Release Inventory (TRI) and compliance and enforcement data presented in the first set of Sector Notebooks is two years older than that presented in the second set of documents published in 1997. Due to constantly changing economic, technological, and regulatory factors, pollutant release and compliance and enforcement data for an industry sector can change significantly from year-to-year. This refresh document was primarily developed to update the time sensitive data presented in the original set of Sector Notebooks.

In addition, the TRI and compliance and enforcement data included with the Sector Notebooks published in 1997 are presented in this document. A particular strength of the Sector Notebooks has been the consistent organization and presentation of data in each document, allowing comparisons between industry sectors based on the same criteria. Therefore, the data presented in this document cover both the original set of 17 sectors[1] and the second set of nine sectors published in 1997. The same methods were used to collect the data for all sectors presented here.

Readers of the Sector Notebook Series may also be interested in EPA's Sector Facility Indexing Project (SFIP) which is available through EPA's website at www.epa.gov/oeca/sfi. The SFIP is a compilation of individual facility environmental release and compliance data for five key industries: iron and steel, primary non-ferrous metals, petroleum refining, pulp manufacturing, automobile assembly. Although similar types of data may be presented, the SFIP and the Sector Notebook Project are separate projects. Much of the data collected for this Data Refresh were collected prior to the completion of SFIP. Some data definitions and collection methods presented in SFIP may not be reflected in this document.

[1] One Sector Notebook published in 1995, *Profile of the Transportation Equipment Cleaning Industry*, did not contain pollutant release and compliance and enforcement data. Therefore, this sector is not included in this document.

Providing Comments

If you have any comments on the sector notebooks or this document, or if you would like to provide additional information, please send a hard copy and computer disk to the EPA Office of Compliance, Sector Notebook Project, 401 M St., SW (2223-A), Washington, DC 20460. Comments can also be sent via the web page or to notebook@epamail.epa.gov.

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II. CROSS-SECTOR COMPARISONS

This section contains TRI, AIRS, and IDEA data presentations comparing the sectors covered by the Sector Notebook Project[2]. The graph and tables update those presented in the original set of 17 Sector Notebooks with the most recent available data and the additional industry sectors covered in the Sector Notebooks published in 1997.

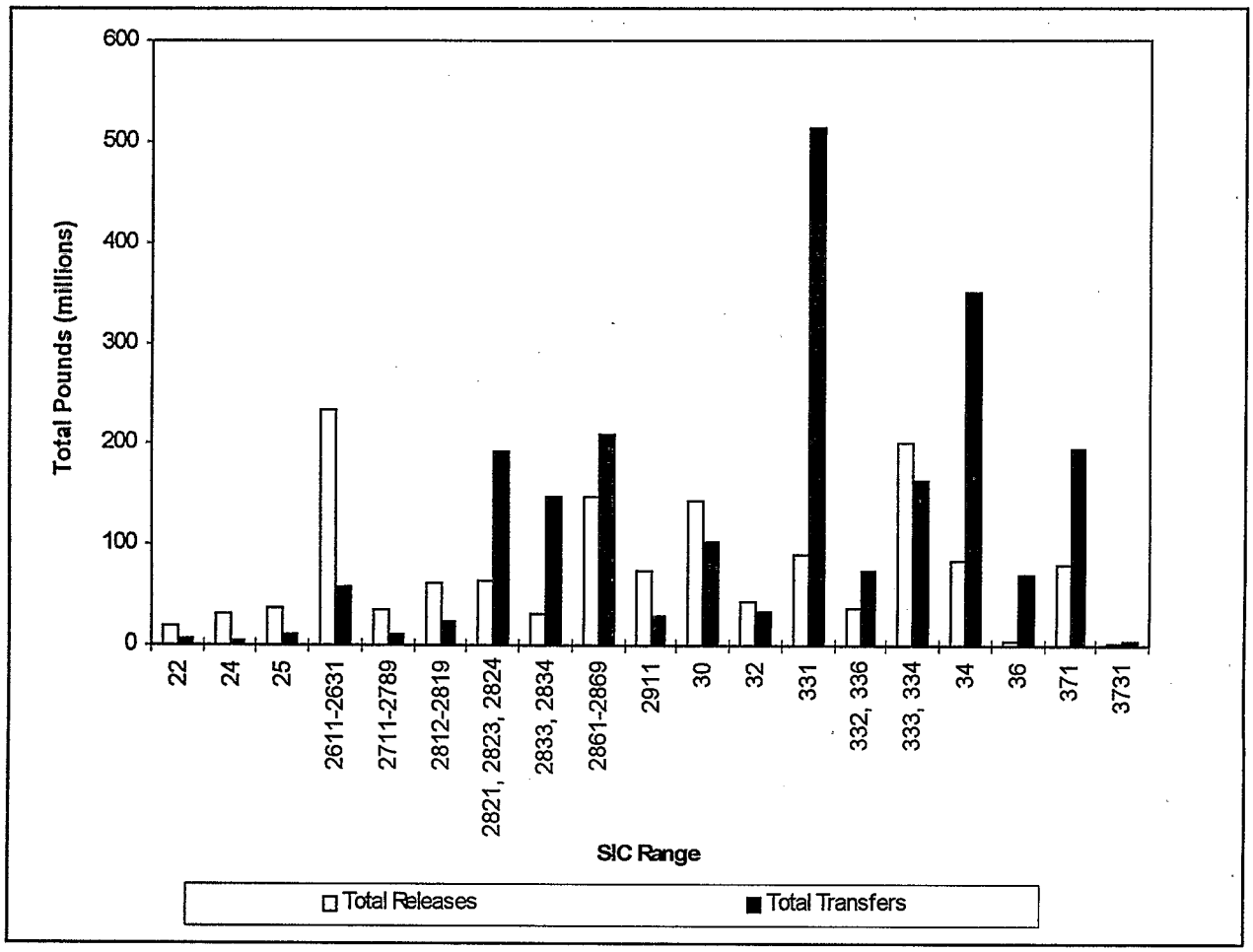
II.A. Toxics Release Inventory (TRI)

The following information is presented as a comparison of pollutant release and transfer data across industrial categories. It is provided to give a general sense of the relative scale of TRI releases and transfers within each sector required to report to TRI and profiled under this project. Please note that the following figures and table do not contain releases and transfers for industrial categories that are not included in this project, and thus cannot be used to draw conclusions regarding the total release and transfer amounts that are reported to TRI. Similar information is available within the annual TRI Public Data Release Book. (See directions for obtaining this on page 20.)

Figure 1 is a graphical representation of a summary of the 1995 TRI data for sectors profiled by the Sector Notebook Project and which were required to report to TRI in the 1995 reporting year. The bar graph presents the total TRI releases and total transfers on the vertical axis. Figure 2 presents the relative percentage of total TRI chemicals (releaseses and transfers) contributed by each of these sectors. The graphs are based on the data shown in Table 1 and are meant to facilitate comparisons between the relative amounts of releases, transfers, and releases per facility both within and between these sectors. The reader should note that differences in the proportion of facilities captured by TRI exist between industry sectors. This can be a factor of poor SIC code matching and relative differences in the number of facilities reporting to TRI from the various sectors. Within some sectors, the majority of facilities are not subject to TRI reporting because they are not considered manufacturing facilities, they have fewer than 10 employees, or because they are below TRI reporting thresholds. For example, many facilities in the printing industry have fewer than 10 employees and therefore are not required to report to TRI. The 1995 TRI data for the printing industry presented in this document is based on reports from 262 facilities, yet the printing industry universe has been put at approximately 70,000 facilities by industry sources; the TRI data covers less than one percent of the industry. As a result, a significant portion of printing industry chemical releases and transfers are not captured by TRI.

[2] TRI data is only presented for those industry sectors covered by the Sector Notebook Project and which were required to report to TRI in the 1995 reporting year.

Figure 1: Summary of TRI Releases and Transfers by Industry

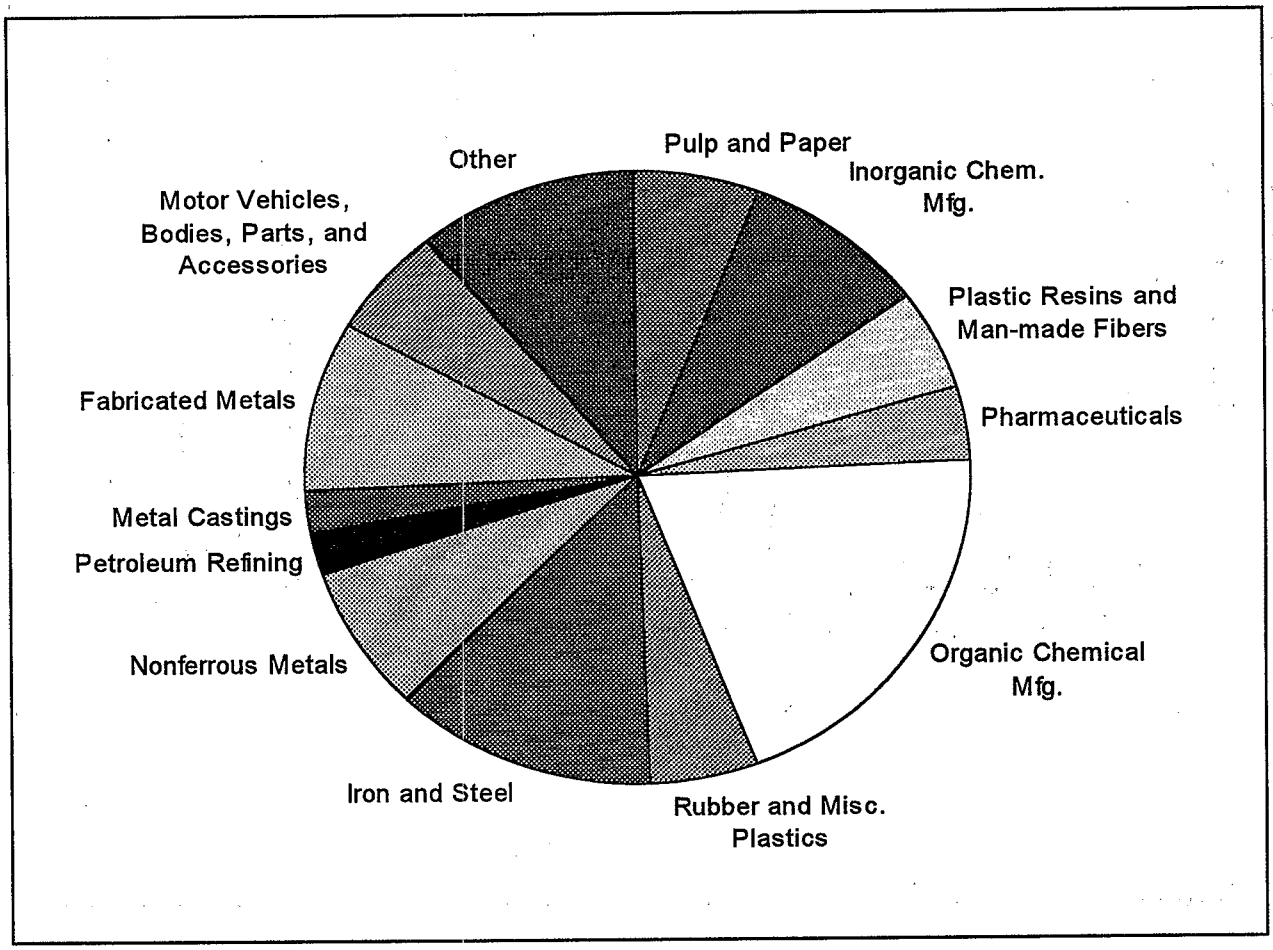


Source: USEPA 1995 Toxics Release Inventory Database.

Key to Standard Industrial Classification (SIC) Codes

SIC Range	Industry Sector	SIC Range	Industry Sector	SIC Range	Industry Sector
22	Textiles	2833, 2834	Pharmaceuticals	332, 336	Metal Casting
24	Lumber and Wood Products	2861-2869	Organic Chem. Mfg.	333, 334	Nonferrous Metals
25	Furniture and Fixtures	2911	Petroleum Refining	34	Fabricated Metals
2611-2631	Pulp and Paper	30	Rubber and Misc. Plastics	36	Electronic Equip. and Comp.
2711-2789	Printing	32	Stone, Clay, and Concrete	371	Motor Vehicles, Bodies, Parts, and Accessories
2812-2819	Inorganic Chemical Manufacturing	331	Iron and Steel	3731	Shipbuilding and Repair
2821, 2823, 2824	Plastic Resins and Man-made Fibers				

Figure 2: 1995 TRI Total Releases and Transfers by Industry Sector



Source: USEPA 1995 Toxics Release Inventory Database.

Other (Industries with releases less than 100 million pounds):	
Textiles	Stone, Clay, and Concrete
Lumber and Wood Products	Electronic Equipment and Computers
Furniture and Fixtures	Shipbuilding and Repair
Printing	

Table 1: Toxics Release Inventory Data for Selected Industries

Industry Sector	SIC Range	# TRI Facilities	TRI Releases		TRI Transfers		Total Releases +Transfers (million lbs.)	Average Releases + Transfers per Facility (pounds)
			Total Releases (million lbs.)	Ave. Releases per Facility (pounds)	Total Transfers (million lbs.)	Ave. Trans. per Facility (pounds)		
Textiles	22	339	17.8	53,000	7.0	21,000	24.8	74,000
Lumber and Wood Products	24	397	30.0	76,000	4.1	10,000	34.1	86,000
Furniture and Fixtures	25	336	37.6	112,000	9.9	29,000	47.5	141,000
Pulp and Paper	2611-2631	305	232.6	763,000	56.5	185,000	289.1	948,000
Printing	2711-2789	262	33.9	129,000	10.4	40,000	44.3	169,000
Inorganic Chem. Mfg.	2812-2819	413	60.7	468,000	21.7	191,000	438.5	659,000
Plastic Resins and Man-made Fibers	2821,2823, 2824	410	64.1	156,000	192.4	469,000	256.5	625,000
Pharmaceuticals	2833, 2834	200	29.9	150,000	147.2	736,000	177.1	886,000
Organic Chemical Mfg.	2861-2869	402	148.3	598,000	208.6	631,000	946.8	1,229,000
Petroleum Refining	2911	180	73.8	410,000	29.2	162,000	103.0	572,000
Rubber and Misc. Plastics	30	1,947	143.1	73,000	102.6	53,000	245.7	126,000
Stone, Clay, and Concrete	32	623	43.9	70,000	31.8	51,000	75.7	121,000
Iron and Steel	331	423	90.7	214,000	513.9	1,215,000	604.6	1,429,000
Metal Casting	332, 336	654	36.0	55,000	73.9	113,000	109.9	168,000
Nonferrous Metals	333, 334	282	201.7	715,000	164	582,000	365.7	1,297,000
Fabricated Metals	34	2,676	83.5	31,000	350.5	131,000	434.0	162,000
Electronic Equip. and Comp.	36	407	4.3	11,000	68.8	169,000	73.1	180,000
Motor Vehicles, Bodies, Parts, and Accessories	371	754	79.3	105,000	194	257,000	273.3	362,000
Shipbuilding	3731	43	2.4	56,000	4.1	95,000	6.5	151,000
Sector Notebook Total	NA	11,053	1,413.6	128,000	2,190.6	198,000	4,550.2	412,000
1995 TRI Total	NA	21,951	2,208.7	101,000	3,534.8	161,000	5,743.5	262,000

Source: *US EPA Toxics Release Inventory Database, 1995.*

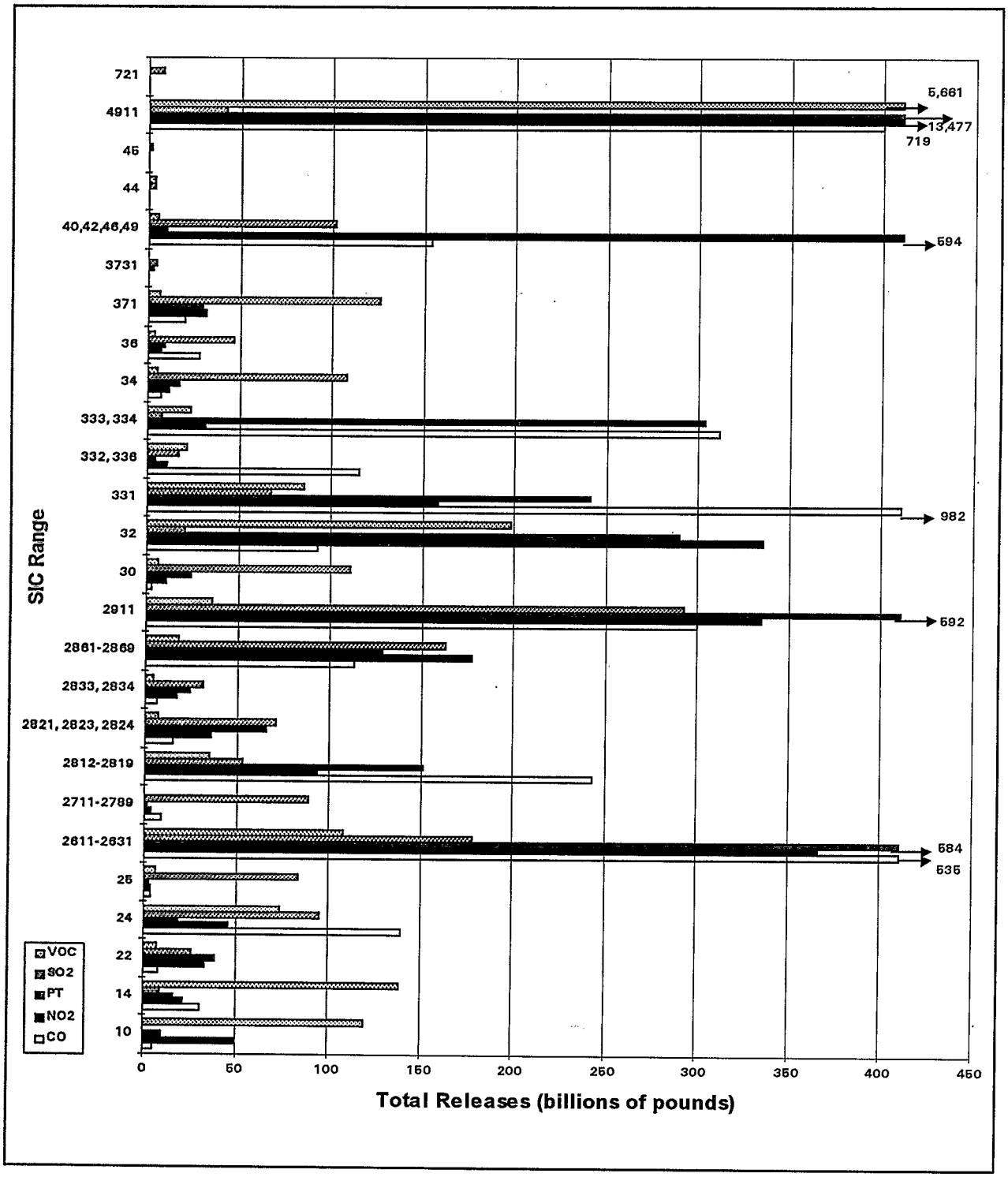
II.B. Aerometric Information Retrieval System (AIRS)

The toxic chemical release data obtained from TRI allows comparisons across years and industry sectors. However, reported chemicals are limited to the approximately 600 TRI chemicals. A large portion of the emissions from manufacturing facilities, therefore, are not captured by TRI. The EPA Office of Air Quality Planning and Standards has compiled air pollutant emission factors for determining the total air emissions of priority pollutants (e.g., VOCs, SOx, NOx, CO, particulates, etc.) from many sources. However, AIRS data, like TRI data, are affected by threshold quantities that limit the number of sources captured. The pollutant contribution from minor sources is not captured.

AIRS contains a wide range of information related to stationary sources of air pollution, including the emissions of a number of air pollutants which may be of concern within a particular industry. With the exception of volatile organic compounds (VOCs), there is little overlap with the TRI chemicals reported above. Table 2 summarizes annual releases (from the industries for which a Sector Profile was prepared) of carbon monoxide (CO), nitrogen dioxide (NO_2), total particulate matter (PT), particulate matter of 10 microns or less, a subset of PT, (PM10), sulfur dioxide (SO_2), and volatile organic compounds (VOCs).

Figure 3 is a graphical representation of a summary of AIRS data for selected sectors profiled by the Sector Notebook Project. AIRS data are collected only for stationary sources; thus, the emissions reported by the Air Transportation, Water Transportation, and Ground Transportation industries are limited to the facilities supporting those industries and do not include emissions from their respective mobile sources. The bar graph presents the releases of five pollutants (not including PM10) on the vertical axis. The graph is based on the data shown in Table 2 and is meant to facilitate comparisons between the relative amounts of releases of the pollutants both within and between these sectors.

Figure 3: Summary of AIRS Releases by Industry*



*Arrows indicate values which overshadow the majority of industry releases. Actual release quantities (in billions or pounds) for each shortened bar are adjacent to their corresponding arrows. Thus, the bars with arrows are not to scale.

Key to Standard Industrial Classification (SIC) Codes

SIC Range	Industry Sector	SIC Range	Industry Sector	SIC Range	Industry Sector
10	Metal Mining	2833, 2834	Pharmaceuticals	34	Fabricated Metals
14	Non-Fuel, Non-Metal Mining	2861-2869	Organic Chem. Mfg.	36	Electronic Equip. and Comp.
22	Textiles	2911	Petroleum Refining	371	Motor Vehicles, Bodies, Parts, and Accessories
24	Lumber and Wood Products	30	Rubber and Misc. Plastics	3731	Shipbuilding and Repair
25	Furniture and Fixtures	32	Stone, Clay, and Concrete	40,42,46,49	Ground Transportation
2611-2631	Pulp and Paper	331	Iron and Steel	44	Water Transportation
2711-2789	Printing	332, 336	Metal Casting	45	Air Transportation
2812-2819	Inorganic Chemical Manufacturing	333, 334	Nonferrous Metals	721	Dry Cleaning
2821, 2823, 2824	Plastic Resins and Manmade Fibers				

Table 2: Air Pollutant Releases by Industry Sector (tons/year)						
Industry Sector	CO	NO_2	PM10	PT	SO_2	VOC
Metal Mining	4,951	49,252	21,732	9,478	1,202	119,761
Non-Fuel, Non-Metal Mining	31,008	21,660	44,305	16,433	9,183	138,684
Textiles	8,164	33,053	1,819	38,505	26,326	7,113
Lumber and Wood Products	139,175	45,533	30,818	18,461	95,228	74,028
Wood Furniture and Fixtures	3,659	3,267	2,950	3,042	84,036	5,895
Pulp and Paper	584,817	365,901	37,869	535,712	177,937	107,676
Printing	8,847	3,629	539	1,772	88,788	1,291
Inorganic Chemicals	242,834	93,763	6,984	150,971	52,973	34,885
Plastic Resins and Man-made Fibers	15,022	36,424	2,027	65,875	71,416	7,580
Pharmaceuticals	6,389	17,091	1,623	24,506	31,645	4,733
Organic Chemicals	112,999	177,094	13,245	129,144	162,488	17,765
Petroleum Refining	299,546	334,795	25,271	592,117	292,167	36,421
Rubber and Plastic	2,463	10,977	3,391	24,366	110,739	6,302
Stone, Clay, Glass and Concrete	92,463	335,290	58,398	290,017	21,092	198,404
Iron and Steel	982,410	158,020	36,973	241,436	67,682	85,608
Metal Castings	115,269	10,435	14,667	4,881	17,301	21,554
Nonferrous Metals	311,733	31,121	12,545	303,599	7,882	23,811
Fabricated Metal Products	7,135	11,729	2,811	17,535	108,228	5,043
Electronics and Computers	27,702	7,223	1,230	8,568	46,444	3,464
Motor Vehicle Assembly	19,700	31,127	3,900	29,766	125,755	6,212
Shipbuilding and Repair	109	866	762	2,862	4,345	707
Ground Transportation	153,631	594,672	2,338	9,555	101,775	5,542
Water Transportation	179	476	676	712	3,514	3,775
Air Transportation	1,244	960	133	147	1,815	144
Fossil Fuel Electric Power	399,585	5,661,468	221,787	13,477,367	42,726	719,644
Dry Cleaning	145	781	10	725	7,920	40
Source: U.S. EPA Office of Air and Radiation, AIRS Database, 1997.						

II.C. Integrated Data for Enforcement Analysis (IDEA) System

Until recently, EPA has focused much of its attention on measuring compliance with specific environmental statutes. This approach allows the Agency to track compliance with the Clean Air Act (CAA), the Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA), and other environmental statutes. Within the last several years, the Agency has begun to supplement single-statute compliance indicators with facility-specific, multimedia indicators of compliance. In doing so, EPA is in a better position to track compliance with all statutes at the facility level, and within specific industrial sectors.

A major step in building the capacity to compile multimedia/multistatute data for industrial sectors was the creation of EPA's Integrated Data for Enforcement Analysis (IDEA) system. IDEA has the capacity to "read into" the Agency's single-statute databases, extract compliance records, and match the records to individual facilities. The IDEA system can match Air, Water, Waste, Toxics/Pesticides/EPCRA, TRI, and Enforcement Docket records for a given facility, and generate a list of historical permit, inspection, and enforcement activity. IDEA also has the capability to analyze data by geographic area and corporate entity. As the capacity to generate multimedia compliance data improves, EPA will make available more in-depth compliance and enforcement information.

Compliance and Enforcement Profile Description

Using inspection, violation and enforcement data from the IDEA system, this section provides information regarding the historical compliance and enforcement activity of sectors. For each of these sectors, the IDEA system was used to obtain facility compliance and enforcement data from the various single-media databases. The data obtained covers facilities that are regulated under one or more of the following environmental statutes: CWA, CAA, RCRA, Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), Toxic Substances Control Act (TSCA), and Emergency Planning and Community Right-to-Know Act (EPCRA). There are a number of other federal statutory requirements that are not included in the sector notebook project compliance and enforcement profiles. These include, for example, requirements under Superfund and the Safe Drinking Water Act. The analysis in this report summarizes inspection and enforcement actions, retrospectively, and reflects only those EPA, State, and local activities that have been entered into EPA's databases.

Within the IDEA system, one can design compliance history queries to obtain facility-level data for specific industry sectors, environmental statutes, geographic regions, time periods, or other characteristics. The "facility

universe" obtained from an IDEA search depends on how the selection criteria are specified. Each program office database retains sector-identifying SIC information that are often reported inconsistently by facilities. Therefore, depending on the search criteria specified, many different universes of facilities are possible, even within a single industry sector.

In the search criteria used in this section, a facility must have a TRI reporting number and must report only SIC codes within that industry sector's defined range. This selection criteria allows the compliance and enforcement data and chemical release data to be compiled using a consistent method. The selection criteria in this document are consistent across sectors with a few exceptions. For sectors that were not required to file 1995 TRI reports (e.g., Non-Fuel, Non-Metal Mining; Metal Mining) and those that do not normally report to the TRI program because of size (Printing and Dry Cleaning), data have been provided from all facilities in EPA's Facility Indexing System (FINDS) that fall within the defined sector SIC code range. FINDS assigns a common facility number to EPA single-statute permit records. Please note, in this document, EPA does not attempt to define the precise number of facilities that fall within each sector. Rather, this section portrays the records of the facilities within the sector that are included in the EPA databases, which is the most accurate data available. For data that includes a more precise count of facilities in an individual sector see the Sector Facility Indexing Project, which is described on page 2.

Following this discussion is a list of definitions for each data column of the tables presented at the end of this section. The values in the tables summarize inspections and enforcement actions for each sector, and reflect solely EPA, State, and local compliance assurance activities that have been entered into EPA databases. To identify any changes in trends, this section shows the results of data queries for two different time periods, one for the past five calendar years (April 1, 1992 to March 31, 1997) and the other for the most recent twelve-month period (April 1, 1996 to March 31, 1997). The five-year analysis gives an average level of activity for that period for comparison to the more recent compliance and enforcement activity.

Because most inspections focus on single-media requirements, the data queries presented in this section are taken from single media databases. This document does not provide data on whether inspections are state/local or EPA-led. However, the table breaking down the universe of violations does give the reader a crude measurement of the EPA's and states' efforts within each media program. The data presented in the industry-specific tables

illustrate the variations across EPA Regions for certain sectors.[3] This variation may be attributable to state/local data entry variations, specific geographic concentrations, proximity to population centers, sensitive ecosystems, highly toxic chemicals used in production, or historical noncompliance. Hence, the exhibited data do not rank regional performance or necessarily reflect which regions may have the most compliance problems.

Compliance and Enforcement Data Definitions

General Definitions

Facility Indexing System (FINDS) -- assigns a common facility number to EPA single-media permit records. The FINDS identification number allows EPA to compile and review all permit, compliance, enforcement and pollutant release data for any given regulated facility.

Integrated Data for Enforcement Analysis (IDEA) -- is a data integration system that can retrieve information from the major EPA program office databases. IDEA uses the FINDS identification number to link separate data records from EPA's databases. This allows retrieval of records from across media or statutes for any given facility, thus creating a "master list" of records for that facility. Some of the data systems accessible through IDEA are: AFS (AIRS Facility Subsystem, Office of Air and Radiation), PCS (Permit Compliance System, Office of Water), RCRIS (Resource Conservation and Recovery Information System, Office of Solid Waste), NCDB (National Compliance Data Base, Office of Prevention, Pesticides, and Toxic Substances), CERCLIS (Comprehensive Environmental and Liability Information System, Superfund), and TRIS (Toxic Release Inventory System). IDEA also contains information from outside sources such as Dun and Bradstreet and the Occupational Safety and Health Administration (OSHA). Most data queries displayed in notebook sections IV, Chemical Releases and Transfers, and VII, Compliance and Enforcement History, were conducted using IDEA.

Data Table Column Heading Definitions

Facilities in Search -- are based on the universe of TRI reporters within the listed SIC code range. For industries not covered under TRI reporting requirements (metal mining; non-fuel; non-metal mining; electric power generation; ground transportation; water transportation; and dry cleaning), or

[3] EPA Regions include the following states: I (CT, MA, ME, RI, NH, VT); II (NJ, NY, PR, VI); III (DC, DE, MD, PA, VA, WV); IV (AL, FL, GA, KY, MS, NC, SC, TN); V (IL, IN, MI, MN, OH, WI); VI (AR, LA, NM, OK, TX); VII (IA, KS, MO, NE); VIII (CO, MT, ND, SD, UT, WY); IX (AZ, CA, HI, NV, Pacific Trust Territories); X (AK, ID, OR, WA).

industries in which only a very small fraction of facilities report to TRI (e.g., printing), the notebook uses the FINDS universe for executing data queries. The SIC code range selected for each search is defined by each notebook's selected SIC code coverage.

Facilities Inspected -- indicates the level of EPA and state agency inspections for the facilities in this data search. These values show what percentage of the facility universe is inspected in a one-year or five-year period.

Number of Inspections -- measures the total number of inspections conducted in this sector. An inspection event is counted each time it is entered into a single media database.

Average Time Between Inspections -- provides an average length of time, expressed in months, between compliance inspections at a facility within the defined universe.

Facilities with One or More Enforcement Actions -- expresses the number of facilities that were the subject of at least one enforcement action within the defined time period. This category is broken down further into federal and state actions. Data are obtained for administrative, civil/judicial, and criminal enforcement actions. Readers should note that, historically, criminal enforcement actions have not been fully reflected in the EPA databases. A facility with multiple enforcement actions is only counted once in this column, e.g., a facility with 3 enforcement actions counts as 1 facility.

Total Closed Enforcement Actions -- describes the total number of enforcement actions identified for an industrial sector across all environmental statutes. A facility with multiple enforcement actions is counted multiple times, e.g., a facility with 3 enforcement actions counts as 3.

State Lead Actions -- shows what percentage of the total enforcement actions are taken by state and local environmental agencies. Varying levels of use by states of EPA data systems may limit the volume of actions recorded as state enforcement activity. Some states extensively report enforcement activities into EPA data systems, while other states may use their own data systems.

Federal Lead Actions -- shows what percentage of the total enforcement actions are taken by the United States Environmental Protection Agency. This value includes referrals from state agencies. Many of these actions result from coordinated or joint state/federal efforts.

Enforcement to Inspection Rate -- is a ratio of enforcement actions to inspections, and is presented for comparative purposes only. This ratio is a

rough indicator of the relationship between inspections and enforcement. It relates the number of enforcement actions and the number of inspections that occurred within the one-year or five-year period. This ratio includes the inspections and enforcement actions reported under the CWA, CAA and RCRA. Inspections and actions from the TSCA/FIFRA/ EPCRA database are not factored into this ratio because most of the actions taken under these programs are not the result of facility inspections. Also, this ratio does not account for enforcement actions arising from non-inspection compliance monitoring activities (e.g., self-reported water discharges) that can result in enforcement action within the CAA, CWA, and RCRA.

Facilities with One or More Violations Identified -- indicates the percentage of inspected facilities having a violation identified in one of the following data categories: In Violation or Significant Violation Status (CAA); Reportable Noncompliance, Current Year Noncompliance, Significant Noncompliance (CWA); Noncompliance and Significant Noncompliance (FIFRA, TSCA, and EPCRA); Unresolved Violation and Unresolved High Priority Violation (RCRA). The values presented for this column reflect the extent of noncompliance within the measured time frame, but do not distinguish between the severity of the noncompliance. Violation status may be a precursor to an enforcement action, but does not necessarily indicate that an enforcement action will occur.

Media Breakdown of Enforcement Actions and Inspections -- four columns identify the proportion of total inspections and enforcement actions within EPA Air, Water, Waste, and FIFRA/TSCA/EPCRA databases. Each column is a percentage of either the "Total Inspections," or the "Total Actions" column.

Tables 3 and 4 allow comparisons between the compliance histories of the industries covered by the Sector Notebooks. Comparisons between Tables 3 and 4 permit the identification of trends in compliance and enforcement records of the various industries by comparing data covering the last five years (April 1992 to April 1997) to that of the past year (April 1996 to April 1997).

Tables 5 and 6 provide a more in-depth comparison between the sectors by breaking out the compliance and enforcement data by environmental statute. As in the previous Tables (Tables 3 and 4), the data cover the last five years (Table 5) and the last one year (Table 6) to facilitate the identification of recent trends.

Table 3: Five-Year Enforcement and Compliance Summary for Selected Industries

A	B	C	D	E	F	G	H	I	J
Industry Sector	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Closed Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
Metal Mining	1,232	378	1,600	46	63	111	53%	47%	0.07
Non-Fuel, Non-Metal Mining	5,256	2,803	12,826	25	385	622	77%	23%	0.05
Textiles	355	267	1,465	15	53	83	90%	10%	0.06
Lumber and Wood	712	473	2,767	15	134	265	70%	30%	0.10
Furniture	499	386	2,379	13	65	91	81%	19%	0.04
Pulp and Paper	484	430	4,630	6	150	478	80%	20%	0.10
Printing	5,862	2,092	7,691	46	238	428	88%	12%	0.06
Inorganic Chemicals	441	286	3,087	9	89	235	74%	26%	0.08
Resins and Manmade Fibers	329	263	2,430	8	93	219	76%	24%	0.09
Pharmaceuticals	164	129	1,201	8	35	122	80%	20%	0.10
Organic Chemicals	425	355	4,294	6	153	468	65%	35%	0.11
Petroleum Refining	156	148	3,081	3	124	763	68%	32%	0.25
Rubber and Plastic	1,818	981	4,383	25	178	276	82%	18%	0.06
Stone, Clay, Glass and Concrete	615	388	3,474	11	97	277	75%	25%	0.08
Iron and Steel	349	275	4,476	5	121	305	71%	29%	0.07
Metal Castings	669	424	2,535	16	113	191	71%	29%	0.08
Nonferrous Metals	203	161	1,640	7	68	174	78%	22%	0.11
Fabricated Metal Products	2,906	1,858	7,914	22	365	600	75%	25%	0.08
Electronics	1,250	863	4,500	17	150	251	80%	20%	0.06
Automobile Assembly	1,260	927	5,912	13	253	413	82%	18%	0.07
Shipbuilding and Repair	44	37	243	9	20	32	84%	16%	0.13
Ground Transportation	7,786	3,263	12,904	36	375	774	84%	16%	0.06
Water Transportation	514	192	816	38	36	70	61%	39%	0.09
Air Transportation	444	231	973	27	48	97	88%	12%	0.10
Fossil Fuel Electric Power	3,270	2,166	14,210	14	403	789	76%	24%	0.06
Dry Cleaning	6,063	2,360	3,813	95	55	66	95%	5%	0.02

Table 4: One-Year Enforcement and Compliance Summary for Selected Industries

A	B	C	D	E		F		G	H
				Facilities with 1 or More Violations		Facilities with 1 or more Enforcement Actions		Total Closed Enforcement Actions	Enforcement to Inspection Rate
Industry Sector	Facilities in Search	Facilities Inspected	Number of Inspections	Number	Percent*	Number	Percent*		
Metal Mining	1,232	142	211	102	72%	9	6%	10	0.05
Non-Fuel, Non-Metal Mining	5,256	1,481	2,451	384	26%	73	5%	91	0.04
Textiles	355	172	295	96	56%	10	6%	12	0.04
Lumber and Wood	712	279	507	192	69%	44	16%	52	0.10
Furniture	499	254	459	136	54%	9	4%	11	0.02
Pulp and Paper	484	317	788	248	78%	43	14%	74	0.09
Printing	5,862	892	1,363	577	65%	28	3%	53	0.04
Inorganic Chemicals	441	200	548	155	78%	19	10%	31	0.06
Resins and Manmade Fibers	329	173	419	152	88%	26	15%	36	0.09
Pharmaceuticals	164	80	209	84	105%	8	10%	14	0.07
Organic Chemicals	425	259	837	243	94%	42	16%	56	0.07
Petroleum Refining	156	132	565	129	98%	58	44%	132	0.23
Rubber and Plastic	1,818	466	791	389	83%	33	7%	41	0.05
Stone, Clay, Glass and Concrete	615	255	678	151	59%	19	7%	27	0.04
Iron and Steel	349	197	866	174	88%	22	11%	34	0.04
Metal Castings	669	234	433	240	103%	24	10%	26	0.06
Nonferrous Metals	203	108	310	98	91%	17	16%	28	0.09
Fabricated Metal	2,906	849	1,377	796	94%	63	7%	83	0.06
Electronics	1,250	420	780	402	96%	27	6%	43	0.06
Automobile Assembly	1,260	507	1,058	431	85%	35	7%	47	0.04
Shipbuilding and Repair	44	22	51	19	86%	3	14%	4	0.08
Ground Transportation	7,786	1,585	2,499	681	43%	85	5%	103	0.04
Water Transportation	514	84	141	53	63%	10	12%	11	0.08
Air Transportation	444	96	151	69	72%	8	8%	12	0.08
Fossil Fuel Electric Power	3,270	1,318	2,430	804	61%	100	8%	135	0.06
Dry Cleaning	6,063	1,234	1,436	314	25%	12	1%	16	0.01

**Percentages in Columns E and F are based on the number of facilities inspected (Column C). Percentages can exceed 100% because violations and actions can occur without a facility inspection.*

Table 5: Five-Year Inspection and Enforcement Summary by Statute for Selected Industries

Industry Sector	Facilities Inspected	Total Inspections	Total Closed Enforcement Actions	Clean Air Act		Clean Water Act		RCRA		FIFRA/TSCA/ EPCRA/Other	
				% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions
Metal Mining	378	1,600	111	39%	19%	52%	52%	8%	12%	1%	17%
Non-Fuel, Non-Metal Mining	2,803	12,826	622	83%	81%	14%	13%	3%	4%	0%	3%
Textiles	267	1,465	83	58%	54%	22%	25%	18%	14%	2%	6%
Lumber and Wood	473	2,767	265	49%	47%	6%	6%	44%	31%	1%	16%
Furniture	386	2,379	91	62%	42%	3%	0%	34%	43%	1%	14%
Pulp and Paper	430	4,630	478	51%	59%	32%	28%	15%	10%	2%	4%
Printing	2,092	7,691	428	60%	64%	5%	3%	35%	29%	1%	4%
Inorganic Chemicals	286	3,087	235	38%	44%	27%	21%	34%	30%	1%	5%
Resins and Manmade Fibers	263	2,430	219	35%	43%	23%	28%	38%	23%	4%	6%
Pharmaceuticals	129	1,201	122	35%	49%	15%	25%	45%	20%	5%	5%
Organic Chemicals	355	4,294	468	37%	42%	16%	25%	44%	28%	4%	6%
Petroleum Refining	148	3,081	763	42%	59%	20%	13%	36%	21%	2%	7%
Rubber and Plastic	981	4,383	276	51%	44%	12%	11%	35%	34%	2%	11%
Stone, Clay, Glass and Concrete	388	3,474	277	56%	57%	13%	9%	31%	30%	1%	4%
Iron and Steel	275	4,476	305	45%	35%	26%	26%	28%	31%	1%	8%
Metal Castings	424	2,535	191	55%	44%	11%	10%	32%	31%	2%	14%
Nonferrous Metals	161	1,640	174	48%	43%	18%	17%	33%	31%	1%	10%
Fabricated Metal	1,858	7,914	600	40%	33%	12%	11%	45%	43%	2%	13%
Electronics	863	4,500	251	38%	32%	13%	11%	47%	50%	2%	7%
Automobile Assembly	927	5,912	413	47%	39%	8%	9%	43%	43%	2%	9%
Shipbuilding and Repair	37	243	32	39%	25%	14%	25%	42%	47%	5%	3%
Ground Transportation	3,263	12,904	774	59%	41%	12%	11%	29%	45%	1%	3%
Water Transportation	192	816	70	39%	29%	23%	34%	37%	33%	1%	4%
Air Transportation	231	973	97	25%	32%	27%	20%	48%	48%	0%	0%
Fossil Fuel Electric Power	2,166	14,210	789	57%	59%	32%	26%	11%	10%	1%	5%
Dry Cleaning	2,360	3,813	66	56%	23%	3%	6%	41%	71%	0%	0%

Table 6: One-Year Inspection and Enforcement Summary by Statute for Selected Industries

Industry Sector	Facilities Inspected	Total Inspections	Total Closed Enforcement Actions	Clean Air Act		Clean Water Act		RCRA		FIFRA/TSCA/ EPCRA/Other	
				% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions
Metal Mining	142	211	10	52%	0%	40%	40%	8%	30%	0%	30%
Non-Fuel, Non-Metal Mining	1,481	2,451	91	87%	89%	10%	9%	3%	2%	0%	0%
Textiles	172	295	12	66%	75%	17%	17%	17%	8%	0%	0%
Lumber and Wood	279	507	52	51%	30%	6%	5%	44%	25%	0%	40%
Furniture	254	459	11	66%	45%	2%	0%	32%	45%	0%	9%
Pulp and Paper	317	788	74	54%	73%	32%	19%	14%	7%	0%	1%
Printing	892	1,363	53	63%	77%	4%	0%	33%	23%	0%	0%
Inorganic Chemicals	200	548	31	35%	59%	26%	9%	39%	25%	0%	6%
Resins and Manmade Fibers	173	419	36	38%	51%	24%	38%	38%	5%	0%	5%
Pharmaceuticals	80	209	14	43%	71%	11%	14%	45%	14%	0%	0%
Organic Chemicals	259	837	56	40%	54%	13%	13%	47%	34%	0%	0%
Petroleum Refining	132	565	132	49%	67%	17%	8%	34%	15%	0%	10%
Rubber and Plastic	466	791	41	55%	64%	10%	13%	35%	23%	0%	0%
Stone, Clay, Glass and Concrete	255	678	27	62%	63%	10%	7%	28%	30%	0%	0%
Iron and Steel	197	866	34	52%	47%	23%	29%	26%	24%	0%	0%
Metal Castings	234	433	26	60%	58%	10%	8%	30%	35%	0%	0%
Nonferrous Metals	108	310	28	44%	43%	15%	20%	41%	30%	0%	7%
Fabricated Metal	849	1,377	83	46%	41%	11%	2%	43%	57%	0%	0%
Electronics	420	780	43	44%	37%	14%	5%	43%	53%	0%	5%
Automobile Assembly	507	1,058	47	53%	47%	7%	6%	41%	47%	0%	0%
Shipbuilding and Repair	22	51	4	54%	0%	11%	50%	35%	50%	0%	0%
Ground Transportation	1,585	2,499	103	64%	46%	11%	10%	26%	44%	0%	1%
Water Transportation	84	141	11	38%	9%	24%	36%	38%	45%	0%	9%
Air Transportation	96	151	12	28%	33%	15%	42%	57%	25%	0%	0%
Fossil Fuel Electric Power	1,318	2,430	135	59%	73%	32%	21%	9%	5%	0%	0%
Dry Cleaning	1,234	1,436	16	69%	56%	1%	6%	30%	38%	0%	0%

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III. INDUSTRY SECTOR-SPECIFIC DATA

This section contains industry-specific TRI and compliance and enforcement data for the Sector Notebook Project industry sectors. For those sectors not required to report to TRI, only the table of five-year compliance and enforcement data by EPA Region is included. All other sector sections contain this table as well as tables listing TRI releases and transfers, largest volume TRI releasing facilities, and TRI source reduction and recycling activities.

1995 TRI Releases and Transfers by Number of Facilities Reporting

This section is designed to provide background information on the pollutant releases that are reported by this industry. For industries that are required to report, the best source of comparative pollutant release information is TRI Pursuant to EPCRA, TRI includes self-reported facility release and transfer data for over 600 toxic chemicals. Facilities within SIC Codes 20 through 39 (manufacturing industries) that have more than 10 employees, and that are above weight-based reporting thresholds are required to report TRI on-site releases and off-site transfers. The information presented within the sector notebooks is derived from the most recently available (1995) TRI reporting year (which includes over 600 chemicals), and focuses primarily on the on-site releases reported by each sector. Because TRI requires consistent reporting regardless of sector, it is an excellent tool for drawing comparisons across industries. TRI data provide the type, amount, and media receptor of each chemical released or transferred.

Although this document does not present historical information regarding TRI chemical releases over time, please note that, in general, toxic chemical releases have been declining. In fact, according to the 1995 TRI Public Data Release, reported on-site releases of toxic chemicals to the environment decreased by 5 percent (85.4 million pounds) between 1994 and 1995 (not including chemicals added and removed from the TRI chemical list during this period). Reported releases dropped by 46 percent between 1988 and 1995. Reported transfers of TRI chemicals to off-site locations increased by 0.4 percent (11.6 million pounds) between 1994 and 1995. More detailed information can be obtained from EPA's annual TRI Public Data Release book (which is available through the EPCRA Hotline at 800-535-0202), or directly from the TRIS database (for user support call 202-260-1531).

TRI Data Limitations

Certain limitations exist regarding TRI data. Within some sectors, (e.g. dry cleaning and printing) the majority of facilities are not subject to TRI reporting because they are not considered manufacturing industries, or

because they are below TRI reporting thresholds. For these sectors, release information from other data sources has been included. In addition, many facilities report more than one SIC code reflecting the multiple operations carried out on-site. Therefore, reported releases and transfers may or may not all be associated with the industrial operations described in a notebook.

The reader should also be aware that TRI "pounds released" data presented is not equivalent to a "risk" ranking for each industry. Weighting each pound of release equally does not factor in the relative toxicity of each chemical that is released. The Agency is in the process of developing an approach to assign toxicological weightings to each chemical released so that one can differentiate between pollutants with significant differences in toxicity.

Definitions Associated With TRI Data Tables

General Definitions

SIC Code -- is the Standard Industrial Classification (SIC) code, a statistical classification standard used for all establishment-based Federal economic statistics. The SIC codes facilitate comparisons between facility and industry data.

TRI Facilities -- are manufacturing facilities that have 10 or more full-time employees and are above established chemical throughput thresholds. Manufacturing facilities are defined as facilities in SIC primary codes 20-39. Facilities must submit estimates for all chemicals that are on the EPA's defined list and are above throughput thresholds.

Data Table Column Heading Definitions

The following definitions are based upon standard definitions developed by EPA's TRI Program. The categories below represent the possible pollutant destinations that can be reported.

RELEASES -- are on-site discharges of a toxic chemical to the environment. This includes emissions to the air, discharges to bodies of water, releases at the facility to land, as well as contained disposal into underground injection wells.

Releases to Air (Point and Fugitive Air Emissions) -- include all air emissions from industry activity. Point emissions occur through confined air streams as found in stacks, vents, ducts, or pipes. Fugitive emissions include equipment leaks, evaporative losses from surface impoundments and spills, and releases from building ventilation systems.

Releases to Water (Surface Water Discharges) -- encompass any releases going directly to streams, rivers, lakes, oceans, or other bodies of water. Releases due to runoff, including storm water runoff, are also reportable to TRI.

Releases to Land -- occur within the boundaries of the reporting facility. Releases to land include disposal of toxic chemicals in landfills, land treatment/application farming, surface impoundments, and other disposal on land (such as spills, leaks, or waste piles).

Underground Injection -- is a contained release of a fluid into a subsurface well for the purpose of waste disposal. Wastes containing TRI chemicals are injected into either Class I wells or Class V wells. Class I wells are used to inject liquid hazardous wastes or dispose of industrial and municipal wastewaters beneath the lowermost underground source of drinking water. Class V wells are generally used to inject non-hazardous fluid into or above an underground source of drinking water. TRI reporting does not currently distinguish between these two types of wells, although there are important differences in environmental impact between these two methods of injection.

TRANSFERS -- are transfers of toxic chemicals in wastes to a facility that is geographically or physically separate from the facility reporting under TRI. Chemicals reported to TRI as transferred are sent to off-site facilities for the purpose of recycling, energy recovery, treatment, or disposal. The quantities reported represent a movement of the chemical away from the reporting facility. Except for off-site transfers for disposal, the reported quantities do not necessarily represent entry of the chemical into the environment.

Transfers to POTWs -- are wastewater transferred through pipes or sewers to a publicly owned treatments works (POTW). Treatment or removal of a chemical from the wastewater depends on the nature of the chemical, as well as the treatment methods present at the POTW. Not all TRI chemicals can be treated or removed by a POTW. Some chemicals, such as metals, may be removed but not destroyed and may be disposed of in landfills or discharged to receiving waters.

Transfers to Recycling -- are wastes sent off-site for the purposes of regenerating or recovery by a variety of recycling methods, including solvent recovery, metals recovery, and acid regeneration. Once these chemicals have been recycled, they may be returned to the originating facility or sold commercially.

Transfers to Energy Recovery -- are wastes combusted off-site in industrial furnaces for energy recovery. Treatment of a chemical by incineration is not considered to be energy recovery.

Transfers to Treatment -- are wastes moved off-site to be treated through a variety of methods, including neutralization, incineration, biological destruction, or physical separation. In some cases, the chemicals are not destroyed but prepared for further waste management.

Transfers to Disposal -- are wastes taken to another facility for disposal, generally as a release to land or as an injection underground.

Carcinogens, Metals, and Ozone Depleters

Users of TRI information should be aware that the TRI data reflect releases and transfers of chemicals, not exposures and risks to the public of those chemicals. The determination of potential risk depends upon many factors, including the toxicity of the chemical, the fate of the chemical after it is released, and the human or other populations which are exposed to the chemical after its release. The TRI list consists of chemicals that vary widely in their toxic effects, degradation or persistence in the environment, and bioconcentration in the food chain.

A number of TRI chemicals can be classified into groups that may be of particular concern to human health and the environment. In the Sector Notebook Data Refresh - 1997, those TRI chemicals that can be classified as either carcinogens, metals, or ozone depleters, have been identified and labeled.

Carcinogens

Some chemicals on the TRI are listed because they are either known human carcinogens or suspect carcinogens. Known human carcinogens are those that have been shown to cause cancer in humans. Suspect carcinogens are those chemicals that have been shown to cause cancer in animals. Under EPCRA Section 313, a chemical does not have to be counted towards threshold and release calculations if it is present in a mixture below the *de minimis* concentration. The *de minimis* limitation is 0.1 percent if the chemical is a known or suspect carcinogen by virtue of appearing in one of three sources: National Toxicology Program (NTP), "Annual Report on Carcinogens"; International Agency for Research on Cancer (IARC) "Monographs"; or 29 CFR 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).The *de minimis* limitation is 1.0 percent for chemicals that do not meet the above OSHA carcinogen criteria. The carcinogen designation in this document relates to any chemical that the Agency determined met the above OSHA criteria and therefore has the 0.1 percent *de minimis* limitation. More information on the specific bases for which individual chemicals were designated as a known or suspect carcinogens can be obtained from the "Toxic Release Inventory Public Data

Release" (Latest Edition). *(To obtain a copy of the TRI Public Data Release, call the EPCRA Hotline at (800) 535-0202.)*

Metals

Metals (including the metal portion of metal compounds) are different from other TRI chemicals because they do not degrade in the environment and are not destroyed. Other TRI-listed chemicals can be destroyed by sunlight, heat, microorganisms, or other chemicals. Although metals cannot be destroyed, they may be converted to a less toxic form. For example, many facilities convert hexavalent chromium (a known carcinogen) to the less toxic trivalent form before releasing or transferring it to off-site locations. Other metal waste may be treated before disposal so that the metal will be less likely to be transported through soils. Although such treatment may limit the availability of the metal to the environment, it does not destroy the metal.

Ozone Depleters

Ozone depleters, such as chlorofluorocarbons (CFCs), halons, 1,1,1-trichloroethane (methyl chloroform), carbon tetrachloride, and bromomethane (methyl bromide), are known to release chlorine or bromine in the stratosphere (earth's upper atmosphere). Chlorine and bromine act as catalysts in the conversion of ozone to oxygen, thus reducing the amount of stratospheric ozone. Stratospheric ozone is important because it shields the earth from ultraviolet-B radiation, which has been shown to cause various adverse human health and environmental effects such as skin cancer, cataracts, and possibly suppressed immune systems. As the ozone layer diminishes, the amount of this harmful radiation reaching the earth's surface increases. These ozone depleters remain in the stratosphere for many decades; thus, emissions today will influence ozone levels far into the future.

Key

In the TRI chemical release and transfer tables in this document, chemicals that have been identified as known or suspect carcinogens are designated with "[C]" following the chemical name. Metals and metal compounds are designated with "[M]" following the chemical name. Ozone depleting chemicals are designated with "[O]" following the chemical name.

Ten Largest Volume TRI Releasing Facilities

The TRI database contains a detailed compilation of self-reported, facility-specific chemical releases. Facilities that have reported the primary SIC codes covered under a Sector Notebook appear on the first list. The next table contains additional facilities that have reported the SIC codes covered within that report, and one or more SIC codes that are not within the scope of that notebook. Therefore, the second list includes facilities that conduct multiple operations -- some that are under the scope of the notebook, and some that are not. Currently, the facility-level data do not allow pollutant releases to be broken apart by industrial process.

Source Reduction and Recycling Activity

The Pollution Prevention Act of 1990 (PPA) requires facilities to report information about the management of TRI chemicals in waste and efforts made to eliminate or reduce those quantities. These data have been collected annually in Section 8 of the TRI reporting Form R beginning with the 1991 reporting year. The data summarized below cover the years 1994-1997 and are meant to provide a basic understanding of the quantities of waste handled by the industry, the methods typically used to manage this waste, and recent trends in these methods. TRI waste management data can be used to assess trends in source reduction within individual industries and facilities and for specific TRI chemicals. This information could then be used as a tool in identifying opportunities for pollution prevention and compliance assistance activities.

While the quantities reported for 1994 and 1995 are estimates of quantities already managed, the quantities listed by facilities for 1996 and 1997 are projections only. The PPA requires these projections to encourage facilities to consider future source reduction, not to establish any mandatory limits. Future-year estimates are not commitments that facilities reporting under TRI are required to meet.

Column B contains the total quantity of TRI chemicals in the waste from routine production operations in 1995. Values in Column C are intended to reveal the percent of production-related waste either transferred off-site or released to the environment. Column C is calculated by dividing the total TRI transfers and releases by the total quantity of production related waste. Columns D, E, and F show the percent of industry TRI wastes that were managed on-site through recycling, energy recovery, or treatment, respectively. Columns G, H, and I contain the percent of industry TRI wastes that were transferred off-site for recycling, energy recovery, or treatment, respectively. The remaining portion of production related wastes, shown in column J, is either released to the environment through direct discharges to

air, land, water, and underground injection, or is transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary

This table provides an overview of the reported compliance and enforcement data for an industry over the past five years (April 1992 to April 1997). These data are also broken out by EPA Regions thereby permitting geographical comparisons. See Section II.C. for a detailed description of the enforcement and compliance data contained in this document.

Metal Mining

Five-Year Enforcement and Compliance Summary for the Metal Mining Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities In Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	4	2	2	120	1	1	100%	0%	--
II	20	12	76	16	2	7	100%	0%	0.09
III	19	9	34	34	0	0	0%	0%	--
IV	39	24	266	9	6	6	83%	17%	0.02
V	44	29	164	16	6	14	64%	36%	0.09
VI	56	22	110	31	6	9	22%	78%	0.08
VII	20	9	96	13	3	4	50%	50%	0.04
VIII	329	78	287	69	14	30	83%	17%	0.10
IX	75	50	315	14	10	14	36%	64%	0.04
X	626	143	250	150	15	26	12%	88%	0.10
TOTAL	1,232	378	1,600	46	63	111	53%	47%	0.07

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Non-Fuel, Non-Metal Mining

Five-Year Enforcement and Compliance Summary for the Non-Fuel, Non-Metal Mining Industry*

A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	157	84	243	39	11	11	82%	18%	0.05
II	202	105	641	19	32	55	93%	7%	0.09
III	528	334	2,367	13	37	54	85%	15%	0.02
IV	1,333	726	3,760	21	99	175	88%	12%	0.05
V	748	457	1,902	24	35	39	85%	15%	0.02
VI	408	207	677	36	46	84	90%	10%	0.12
VII	599	330	1,308	27	76	127	30%	70%	0.10
VIII	927	320	982	57	36	61	97%	3%	0.06
IX	222	184	770	17	8	9	56%	44%	0.01
X	132	56	176	45	5	7	71%	29%	0.04
TOTAL	5,256	2,803	12,826	25	385	622	77%	23%	0.05

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Textiles

1995 TRI Releases for Textile Manufacturing Facilities (SIC 22) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Methanol	64	212,358	2,717,312	1,764	0	0	2,931,434	45,804
Ammonia	51	137,047	1,201,243	6,911	0	0	1,345,201	26,376
Methyl Ethyl Ketone	37	1,469,884	3,450,185	250	0	1	4,920,320	132,982
Toluene	33	588,915	2,918,775	5	0	1	3,507,696	106,294
Phosphoric Acid	32	2,503	48,496	250	0	0	51,249	1,602
Chlorine	31	13,885	20,523	11,908	0	0	46,316	1,494
Antimony Compounds[M]	30	322	1,065	1,067	0	250	2,704	90
Decabromodiphenyl Oxide	26	206	1,075	1,860	0	1,754	4,895	188
Ethylene Glycol	23	5,705	131,720	9,102	0	286	146,813	6,383
Certain Glycol Ethers	21	20,329	166,765	18,651	0	0	205,745	9,797
Chromium Compounds[C, M]	20	15	18	2,712	0	1,811	4,556	228
Zinc Compounds[M]	20	2,645	6,196	480	0	5	9,326	466
1,1,1-Trichloroethane[O]	19	324,499	11,580	0	0	0	336,079	17,688
Copper Compounds[M]	18	2,199	181	10,908	0	2,789	16,077	893
Formaldehyde[C]	18	2,110	66,144	92	0	0	68,346	3,797
Xylene (Mixed Isomers)	18	103,961	740,907	750	0	0	845,618	46,979
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	17	4,451	171,436	250	0	5	176,142	10,361
Sulfuric Acid	15	250	250	0	0	0	500	33
Diisocyanates	11	1,818	1,676	0	0	0	3,494	318
n,n-dimethylformamide[C]	11	60,816	56,263	0	0	0	117,079	10,644
Biphenyl	11	6,935	147,813	762	0	0	155,510	14,137
N-methyl-2-pyrrolidone	10	65,640	324,632	34	0	0	390,306	39,031
Sodium Nitrite	9	19,033	18,005	0	0	0	37,038	4,115
Barium Compounds[M]	8	10	10	5	0	0	25	3
Trichloroethylene[C]	8	40,980	241,477	0	0	0	282,457	35,307
1,2,4-trimethylbenzene	8	6,704	44,108	3,005	0	0	53,817	6,727
Nitrate Compounds	7	0	0	187,450	0	0	187,450	26,779
Formic Acid	7	15,113	4,178	0	0	0	19,291	2,756
Dichloromethane[C]	7	79,576	434,986	0	0	1	514,563	73,509
Methyl Isobutyl Ketone	7	84,572	331,139	0	0	0	415,711	59,387
Phenol	6	6,189	86,482	0	0	0	92,671	15,445
1,2,4-trichlorobenzene	6	7,416	38,623	189	0	0	46,228	7,705
Antimony[M]	6	50	34	0	0	0	84	14
Lead Compounds[C, M]	4	5	5	5	0	0	15	4
Tetrachloroethylene[C]	4	5,818	58,166	0	0	0	63,984	15,996
Copper[M]	4	0	0	0	0	0	0	0
Cobalt Compounds[C, M]	3	0	10	590	0	0	600	200
Styrene[C]	3	63,553	47,181	0	0	0	110,734	36,911
Diethanolamine	3	0	5,696	150	0	0	5,846	1,949
Di(2-ethylhexyl) Phthalate[C]	3	0	799	0	0	0	799	266
Arsenic Compounds[C, M]	2	0	0	0	0	0	0	0
Nickel Compounds[C, M]	2	0	0	0	0	0	0	0
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	2	12,129	13,155	0	0	0	25,284	12,642
Naphthalene	2	173	8,600	7,800	0	0	16,573	8,287
Propylene	2	0	0	0	0	0	0	0
Dimethyl Phthalate	2	0	2,708	0	0	0	2,708	1,354
Lead[C, M]	2	5	5	0	0	0	10	5
Chlorine Dioxide	2	5,141	0	0	0	0	5,141	2,571
Cadmium Compounds[C, M]	1	0	0	0	0	0	0	0
Thiourea[C]	1	0	0	0	0	0	0	0
N-butyl Alcohol	1	0	50	1,900	0	0	1,950	1,950
Hydrogen Cyanide	1	250	2,566	0	0	0	2,816	2,816
Vinyl Chloride[C]	1	5	5	0	0	0	10	10
Acetaldehyde[C]	1	0	13,400	0	0	0	13,400	13,400
Trichlorofluoromethane[O]	1	250	0	0	0	0	250	250
Freon 113[O]	1	18,507	0	0	0	0	18,507	18,507
Methyl Methacrylate	1	454	1,816	0	0	0	2,270	2,270
Dibutyl Phthalate	1	40	46	0	0	0	86	86
2-phenylphenol	1	0	26,240	0	0	0	26,240	26,240

1995 TRI Releases for Textile Manufacturing Facilities (SIC 22) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Acetophenone	1	0	0	0	0	0	0	0
1,4-Dichlorobenzene[C]	1	14,665	0	0	0	0	14,665	14,665
1,2-Dichloroethane[C]	1	0	8,935	0	0	0	8,935	8,935
Maleic Anhydride	1	0	0	0	0	0	0	0
2-methoxyethanol	1	3,200	750	0	0	0	3,950	3,950
N-hexane	1	130,000	658	0	0	0	130,658	130,658
2-ethoxyethanol	1	4,800	900	0	0	0	5,700	5,700
Folpet	1	0	0	0	0	0	0	0
C.I. Basic Green 4	1	0	0	0	0	0	0	0
Toluene-2,4-diisocyanate[C]	1	0	0	0	0	0	0	0
Molybdenum Trioxide	1	750	250	0	0	0	1,000	1,000
Polychlorinated Biphenyls[C]	1	0	0	0	0	0	0	0
1,1-dichloro-1-fluoroethane[O]	1	367,120	0	0	0	0	367,120	367,120
C.I. Disperse Yellow 3	1	349	0	0	0	0	349	349
Nickel[C, M]	1	18	0	0	0	0	18	18
Barium[M]	1	0	0	0	0	0	0	0
Chromium[M]	1	0	0	0	0	0	0	0
	339**	3,913,368	13,575,488	268,850	0	6,903	17,764,609	52,403

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Textile Manufacturing Facilities (SIC 22) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	POTW Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Methanol	64	110,082	0	18,123	6,111	135,698	270,014	4,219
Ammonia	51	517,662	3,849	.	1,548	2,780	525,839	10,311
Methyl Ethyl Ketone	37	4,550	27,000	280,256	324,111	775,448	1,411,365	38,145
Toluene	33	505	32,650	250	52,351	646,897	732,653	22,202
Phosphoric Acid	32	184,990	.	.	25,329	.	210,319	6,572
Chlorine	31	27,891	0	.	.	.	27,891	900
Antimony Compounds[M]	30	72,575	120,995	750	26,401	5,761	226,482	7,549
Decabromodiphenyl Oxide	26	243,056	55,546	1,993	5,434	3,300	309,329	11,897
Ethylene Glycol	23	428,068	38,000	.	.	.	466,068	20,264
Certain Glycol Ethers	21	192,060	14	.	.	9,890	201,964	9,617
Chromium Compounds[C, M]	20	52,996	3,828	750	4,615	.	62,189	3,109
Zinc Compounds[M]	20	60,950	91,231	6,830	7,787	1,213	168,011	8,401
1,1,1-Trichloroethane[O]	19	0	.	614	.	3,922	4,536	239
Copper Compounds[M]	18	18,683	9,482	2,376	1,421	.	31,962	1,776
Formaldehyde[C]	18	5,947	251	.	5,797	121	12,116	673
Xylene (Mixed Isomers)	18	58,600	.	4,800	40,755	43,330	147,485	8,194
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	17	66,613	50,920	.	129,493	.	247,026	14,531
Sulfuric Acid	15	1,585	.	.	29,994	.	31,579	2,105
Diisocyanates	11	0	1,300	3	386	.	1,689	154
n,n-dimethylformamide[C]	11	11,123	291	.	3,403	100,913	115,730	10,521
Biphenyl	11	239,361	.	.	.	.	239,361	21,760
N-methyl-2-pyrrolidone	10	250	1,300	72,767	13,140	94,915	182,372	18,237
Sodium Nitrite	9	128,764	.	.	.	.	128,764	14,307
Barium Compounds[M]	8	10	36,652	.	500	2,403	39,565	4,946
Trichloroethylene[C]	8	10	2,910	326,000	3,000	49,934	381,854	47,732
1,2,4-trimethylbenzene	8	44,335	1,274	.	.	.	45,609	5,701
Nitrate Compounds	7	59,671	9,332	.	.	.	69,003	9,858
Formic Acid	7	593	.	.	.	.	593	85
Dichloromethane[C]	7	5	.	240	5	18,849	19,099	2,728
Methyl Isobutyl Ketone	7	500	3,600	250	1,359	128,668	134,377	19,197
Phenol	6	0	1,566	.	459	21,841	23,866	3,978
1,2,4-trichlorobenzene	6	80,552	31,898	.	.	.	112,450	18,742
Antimony[M]	6	20,627	18,162	1,489	1,258	230	41,766	6,961
Lead Compounds[C, M]	4	257	12,450	79,500	1,010	.	93,217	23,304
Tetrachloroethylene[C]	4	10,928	2,340	.	45,327	.	58,595	14,649
Copper[M]	4	1,735	.	.	.	.	1,735	434
Cobalt Compounds[C, M]	3	858	907	.	.	.	1,765	588
Styrene[C]	3	0	.	.	177	.	177	59
Diethanolamine	3	39,979	.	.	133	.	40,112	13,371
Di(2-ethylhexyl) Phthalate[C]	3	4,500	.	.	.	19,200	23,700	7,900
Arsenic Compounds[C, M]	2	0	216	.	5	.	221	111
Nickel Compounds[C, M]	2	508	.	.	.	.	508	254
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	2	1,916	.	.	.	.	1,916	958
Naphthalene	2	0	.	.	.	.	0	0
Propylene	2	0	.	.	.	.	0	0
Dimethyl Phthalate	2	51,441	.	.	.	.	51,441	25,721
Lead[C, M]	2	5	2,758	.	.	458	3,221	1,611
Chlorine Dioxide	2	0	.	.	.	.	0	0
Cadmium Compounds[C, M]	1	0	250	.	.	.	250	250
Thiourea[C]	1	0	.	.	.	.	0	0
N-butyl Alcohol	1	0	.	.	.	.	0	0
Hydrogen Cyanide	1	0	.	.	.	.	0	0
Vinyl Chloride[C]	1	0	15,167	.	.	2,518	17,685	17,685
Acetaldehyde[C]	1	30,600	.	.	.	.	30,600	30,600
Trichlorofluoromethane[O]	1	0	.	.	.	.	0	0
Freon 113[O]	1	0	.	.	.	.	0	0
Methyl Methacrylate	1	0	.	.	.	.	0	0
Dibutyl Phthalate	1	0	1,875	.	.	3,020	4,895	4,895

1995 TRI Transfers for Textile Manufacturing Facilities (SIC 22) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	POTW Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
2-phenylphenol	1	0	.	.	.	.	0	0
Acetophenone	1	18,233	.	.	.	.	18,233	18,233
1,4-Dichlorobenzene[C]	1	0	.	.	.	.	0	0
1,2-Dichloroethane[C]	1	7,659	.	.	.	.	7,659	7,659
Maleic Anhydride	1	7,530	.	.	.	.	7,530	7,530
2-methoxyethanol	1	0	.	.	.	.	0	0
N-hexane	1	0	.	.	.	.	0	0
2-ethoxyethanol	1	0	.	.	.	.	0	0
Folpet	1	0	1,300	.	.	.	1,300	1,300
C.I. Basic Green 4	1	0	.	.	.	.	0	0
Toluene-2,4-diisocyanate[C]	1	0	.	.	5	.	5	5
Molybdenum Trioxide	1	0	2,300	.	.	.	2,300	2,300
Polychlorinated Biphenyls[C]	1	0	.	.	.	.	0	0
1,1-dichloro-1-fluoroethane[O]	1	0	.	.	.	.	0	0
C.I. Disperse Yellow 3	1	5,189	.	.	.	.	5,189	5,189
Nickel[C, M]	1	0	120	.	.	.	120	120
Barium[M]	1	5	.	750	10	.	765	765
Chromium[M]	1	1,602	.	.	.	.	1,602	1,602
	339**	2,815,559	581,734	797,741	731,324	2,071,309	6,997,667	20,642

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Textile Manufacturing Facilities Reporting Only SIC 22*		
Rank	**Facility[1]**	**Total Releases in Pounds**
1	Gencorp, Columbus, MS**	2,761,015
2	Holliston Mills Inc., Church Hill, TN	1,755,090
3	Avondale Mills, Inc., Graniteville, SC	1,260,050
4	American & Efird Inc., Mount Holly, NC	1,070,442
5	Uniroyal Engineered Products, Stoughton, WI**	758,023
6	Textileather Corporation, Toledo, OH**	520,890
7	Athol Corporation, Butner, NC**	421,229
8	Excello Fabric Finishers Inc., Coshocton, OH	414,000
9	Shaw Ind. Inc., Dalton, GA	412,873
10	Collins & Aikman Products Company, Farmville, NC	367,120

Source: *US Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*
**This facility manufactures coated fabrics and is classified as SIC Code 2295, Miscellaneous Textiles, Coated Fabrics -- Not Rubberized.

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 22 or SIC 22 and Other SIC Codes*		
Rank	**Facility[1]**	**Total Releases in Pounds**
1	Gencorp, Columbus, MS**	2,761,015
2	Holliston Mills Inc., Church Hill, TN**	1,755,090
3	Du Pont, Old Hickory, TN	1,737,853
4	IPC Corinth Div. Inc., Corinth, MS	1,479,471
5	Avondale Mills, Inc., Graniteville, SC	1,260,050
6	American & Efird Inc., Mount Holly, NC	1,070,442
7	E.R. Carpenter Co. Inc., Riverside, CA	896,755
8	Carpenter Co., Russellville, KY	877,660
9	Reeves Intl., Spartanburg, SC	855,355
10	Carpenter Co., Richmond, VA	799,567

Source: *US Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*
**This facility manufactures coated fabrics and is classified as SIC Code 2295, Miscellaneous Textiles, Coated Fabrics -- Not Rubberized.

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for the Textile Industry (SIC 22) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed Off-Site[c]
1994	57.1	7.7	23.6%	7.2%	24.0%	1.4%	3.1%	6.0%	34.9%
1995	57.6	43.0	18.6%	8.6%	30.0%	1.4%	3.6%	6.2%	33.0%
1996	55.2	N/A	21.6%	9.0%	31.2%	1.8%	2.6%	5.4%	28.3%
1997	54.5	N/A	22.3%	9.6%	30.8%	2.9%	2.3%	5.4%	26.9%

Source: *Toxics Release Inventory Database, 1995.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste was < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Textile Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	43	40	143	18	11	14	79%	21%	0.10
II	24	15	74	19	6	11	82%	18%	0.15
III	31	24	168	11	6	6	100%	0%	0.04
IV	217	160	976	13	25	46	98%	2%	0.05
V	20	15	49	24	3	4	100%	0%	0.08
VI	7	4	22	19	1	1	0%	100%	0.05
VII	1	1	4	15	0	0	0%	0%	--
VIII	0	0	0	--	0	0	0%	0%	--
IX	9	6	17	32	0	0	0%	0%	--
X	3	2	12	15	1	1	0%	100%	0.08
TOTAL	355	267	1,465	15	53	83	90%	10%	0.06

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Lumber and Wood Products

1995 TRI Releases for Lumber and Wood Products Facilities (SIC 24) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Arsenic Compounds[C, M]	116	77	332	1,828	0	5	2,242	19
Copper Compounds[M]	116	87	346	2,024	0	5	2,462	21
Chromium Compounds[C, M]	111	78	334	1,886	0	0	2,298	21
Formaldehyde[C]	80	298,356	3,475,428	52,440	0	1,794	3,828,018	47,850
Methanol	68	867,604	13,231,711	527,768	0	19,400	14,646,483	215,389
Creosote[C]	62	332,409	428,173	8,289	0	250	769,121	12,405
Chromium[M]	61	240	485	424	0	0	1,149	19
Arsenic[C, M]	60	240	235	126	0	0	601	10
Copper[M]	59	235	235	207	0	0	677	11
Phenol	31	60,667	565,728	846	0	355	627,596	20,245
Diisocyanates	26	1,215	8,840	0	0	1,218	11,273	434
Pentachlorophenol[C]	25	1,814	4,423	2,069	0	250	8,556	342
Ammonia	23	420,258	787,438	133,155	0	2,300	1,343,151	58,398
Toluene	18	206,372	1,162,736	1,776	0	0	1,370,884	76,160
Xylene (Mixed Isomers)	18	40,413	1,033,568	0	0	0	1,073,981	59,666
Acetaldehyde[C]	15	13,233	1,693,747	5,399	0	2,066	1,714,445	114,296
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	13	250	849,094	0	0	5	849,349	65,335
Methyl Ethyl Ketone	12	8,586	713,870	678	0	0	723,134	60,261
Sulfuric Acid	11	0	587,384	0	0	5	587,389	53,399
Zinc Compounds[M]	7	0	2,011	29,405	0	473,005	504,421	72,060
Phosphoric Acid	7	245	2,385	0	0	0	2,630	376
Ethylbenzene	6	3,800	147,699	0	0	0	151,499	25,250
Methyl Isobutyl Ketone	6	31,619	90,179	0	0	0	121,798	20,300
Chlorine	6	2,036	43,153	16,293	0	0	61,482	10,247
Certain Glycol Ethers	5	51,906	44,800	0	0	0	96,706	19,341
Nitrate Compounds	5	0	0	114,665	0	50	114,715	22,943
N-butyl Alcohol	5	2,709	308,128	0	0	0	310,837	62,167
Catechol	5	0	0	1,323	0	255	1,578	316
Cresol (Mixed Isomers)	4	31	76,005	795	0	10	76,841	19,210
Formic Acid	3	0	0	0	0	0	0	0
Chloroform[C]	3	252,193	202,638	102,623	0	250	557,704	185,901
Naphthalene	3	1,165	327	0	0	0	1,492	497
Styrene[C]	3	7,413	60,897	285	0	0	68,595	22,865
Anthracene	3	2,268	317	0	0	0	2,585	862
Dibenzofuran	3	1,198	268	0	0	0	1,466	489
Chlorine Dioxide	3	80	90,231	0	0	0	90,311	30,104
Dichloromethane[C]	2	87,981	42,805	1	0	0	130,787	65,394
Methyl Methacrylate	2	25,632	2,279	0	0	0	27,911	13,956
1,2,4-trimethylbenzene	2	800	25,500	0	0	0	26,300	13,150
Ethylene Glycol	2	832	30,489	2,800	0	0	34,121	17,061
Tetrachloroethylene[C]	2	368	2,686	0	0	0	3,054	1,527
Nitric Acid	2	0	1,080	0	0	0	1,080	540
1,1,1-Trichloroethane[O]	1	250	750	0	0	0	1,000	1,000
Chloromethane	1	3	27,000	1	0	0	27,004	27,004
Dibutyl Phthalate	1	0	19,858	0	0	0	19,858	19,858
Quinoline	1	.	.	0	0	0	0	0
1,2,4-trichlorobenzene	1	0	17,833	0	0	0	17,833	17,833
Triethylamine	1	5	5	0	0	0	10	10
Asbestos (Friable)[C]	1	1	1	1	0	0	3	3
1,1-dichloro-1-fluoroethane[O]	1	4,970	15,066	0	0	0	20,036	20,036
Ozone	1	0	0	0	0	0	0	0
	397**	2,729,639	25,798,497	1,007,107	0	501,223	30,036,466	75,659

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers For Lumber and Wood Products Facilities (SIC 24) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Arsenic Compounds[C, M]	116	5	58,192	.	12,011	750	70,958	612
Copper Compounds[M]	116	5	57,697	.	7,215	750	65,667	566
Chromium Compounds[C, M]	111	0	67,720	.	8,023	.	75,743	682
Formaldehyde[C]	80	520	1,722	.	1,234	2,084	5,560	70
Methanol	68	205	5,945	8,775	250	22,358	37,533	552
Creosote[C]	62	10,051	2,554,752	2,250	236,703	94,255	2,898,011	46,742
Chromium[M]	61	17	29,960	47,220	12,338	.	89,535	1,468
Arsenic[C, M]	60	4	27,670	.	8,888	.	36,562	609
Copper[M]	59	18	21,459	.	4,932	.	26,409	448
Phenol	31	1,112	282	255	.	.	1,649	53
Diisocyanates	26	5	718	.	7,725	.	8,448	325
Pentachlorophenol[C]	25	900	23,938	360	47,141	14,352	86,691	3,468
Ammonia	23	13,086	1,760	.	25	15	14,886	647
Toluene	18	0	2,403	11,363	11,900	75,717	101,383	5,632
Xylene (Mixed Isomers)	18	5	830	18,002	650	97,846	117,333	6,519
Acetaldehyde[C]	15	0	286	5	.	.	291	19
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	13	0	.	101,200	.	.	101,200	7,785
Methyl Ethyl Ketone	12	0	617	4,495	.	29,036	34,148	2,846
Sulfuric Acid	11	0	.	.	.	.	0	0
Zinc Compounds[M]	7	5	82,250	.	1,250	750	84,255	12,036
Phosphoric Acid	7	0	.	.	.	.	0	0
Ethylbenzene	6	0	.	2,883	250	11,533	14,666	2,444
Methyl Isobutyl Ketone	6	0	.	8,671	.	72,732	81,403	13,567
Chlorine	6	0	.	.	.	.	0	0
Certain Glycol Ethers	5	0	.	250	5	4,545	4,800	960
Nitrate Compounds	5	0	260	.	.	.	260	52
N-butyl Alcohol	5	0	.	5,082	250	18,308	23,640	4,728
Catechol	5	0	22	.	.	.	22	4
Cresol (Mixed Isomers)	4	0	252	.	.	.	252	63
Formic Acid	3	0	.	.	.	.	0	0
Chloroform[C]	3	0	10	.	.	.	10	3
Naphthalene	3	2,840	250	56,532	.	250	59,872	19,957
Styrene[C]	3	5	2,931	.	255	.	3,191	1,064
Anthracene	3	256	250	16,420	.	750	17,676	5,892
Dibenzofuran	3	253	250	25,306	.	250	26,059	8,686
Chlorine Dioxide	3	0	.	.	.	.	0	0
Dichloromethane[C]	2	5	15	.	5,425	.	5,445	2,723
Methyl Methacrylate	2	296	.	.	.	.	296	148
1,2,4-trimethylbenzene	2	0	.	.	.	2,370	2,370	1,185
Ethylene Glycol	2	0	.	.	.	.	0	0
Tetrachloroethylene[C]	2	5	5	5	5,425	.	5,440	2,720
Nitric Acid	2	0	.	.	.	.	0	0
1,1,1-Trichloroethane[O]	1	0	.	.	.	.	0	0
Chloromethane	1	0	.	.	.	.	0	0
Dibutyl Phthalate	1	0	.	504	.	1,465	1,969	1,969
Quinoline	1	0	.	.	.	250	250	250
1,2,4-trichlorobenzene	1	0	.	.	.	.	0	0
Triethylamine	1	0	.	.	.	.	0	0
Asbestos (Friable)[C]	1	0	10,478	.	.	.	10,478	10,478
1,1-dichloro-1-fluoroethane[O]	1	0	.	.	1,278	.	1,278	1,278
Ozone	1	0	.	.	.	.	0	0
	397**	29,598	2,952,924	309,578	373,173	450,366	4,115,639	10,367

[C] Known or suspect carcinogens [M]Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Lumber and Wood Facilities Reporting Only SIC 24*		
Rank	Facility[1]	Total TRI Releases in Pounds
1	Fiber Prods. Ops., Diboll, Texas	490,005
2	Roseburg Forest Prods., Dillard, Oregon	468,890
3	Afco Ind. Inc., Holland, Michigan	438,160
4	International Paper, Nacogdoches,Texas	384,322
5	Potlatch Corp., Bemidji, Minnesota	367,194
6	Willamette Ind. Inc., Bennettsville, South Carolina	326,760
7	Plum Creek Mfg. L.p., Columbia Falls, Montana	315,250
8	Georgia-Pacific Corp., Catawba, South Carolina	289,563
9	ABT Co. Inc., Roaring River, North Carolina	278,015
10	Potlatch Corp., Cook, Minnesota	239,022

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 24 or SIC 24 and Other SIC Codes*			
Rank	Facility[1]	SIC Codes Reported in TRI	Total TRI Releases in Pounds
1	Weyerhaeuser Co., Longview, Washington	2421, 2429, 2493, 2611, 2621, 2812	5,705,746
2	Union Camp Corp., Franklin, Virginia	2493, 2611, 2621, 2631, 2679	3,109,682
3	Weyerhaeuser Co., Springfield, Oregon	2436, 2499, 2631	2,436,284
4	Potlatch Corp., Lewiston, Idaho	2421, 2429, 2611, 2621, 2631	1,850,510
5	Macmillan Bloedel Packaging, Pine Hill, Alabama	2421, 2436, 2621	1,377,468
6	Broyhill Furniture Ind. Inc., Lenoir, North Carolina	2493, 2511	1,227,679
7	Broyhill Furniture Ind. Inc., Lenoir, North Carolina	2435, 2436, 2511	597,794
8	Fiber Prods. Ops., Diboll, Texas	2493	490,005
9	Roseburg Forest Prods., Dillard, Oregon	2435, 2436	468,890
10	Afco Ind. Inc., Holland, Michigan	2493	438,160

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Lumber and Wood Products Facilities (SIC 24) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	156	105%	9%	4%	64%	0%	0%	0%	23%
1995	137	25%	22%	5%	48%	0%	0%	0%	26%
1996	133	---	18%	6%	51%	0%	0%	0%	25%
1997	132	---	18%	6%	52%	0%	0%	0%	23%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Lumber and Wood Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	14	9	21	40	4	4	75%	25%	0.19
II	19	10	37	31	2	3	67%	33%	0.08
III	82	57	406	12	14	47	87%	13%	0.12
IV	238	154	1,106	13	45	67	75%	25%	0.06
V	134	85	399	20	26	52	62%	38%	0.13
VI	82	51	292	17	16	48	56%	44%	0.16
VII	24	20	87	17	3	3	67%	33%	0.03
VIII	23	17	69	20	5	10	80%	20%	0.14
IX	32	21	105	18	6	9	67%	33%	0.09
X	64	49	245	16	13	22	64%	36%	0.09
TOTAL	712	473	2,767	15	134	265	70%	30%	0.10

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Wood Furniture and Fixtures

1995 TRI Releases for Wood Furniture and Fixtures Facilities (SIC 25) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Toluene	266	1,479,594	10,234,554	755	0	589	11,715,492	44,043
Xylene (Mixed Isomers)	196	1,124,999	6,136,999	7	0	743	7,262,748	37,055
Methanol	168	618,719	7,267,279	5	0	300	7,886,303	46,942
Methyl Ethyl Ketone	155	423,104	3,796,245	5	0	196	4,219,550	27,223
N-butyl Alcohol	88	102,744	1,960,001	5	0	0	2,062,750	23,440
Methyl Isobutyl Ketone	65	147,567	1,156,207	5	0	304	1,304,083	20,063
Certain Glycol Ethers	40	128,099	676,581	0	0	0	804,680	20,117
Ethylbenzene	34	173,918	608,582	0	0	250	782,750	23,022
Dichloromethane[C]	14	289,120	117,566	0	0	0	406,686	29,049
1,1,1-Trichloroethane[O]	13	71,483	283,845	0	0	0	355,328	27,333
1,2,4-trimethylbenzene	9	50,890	251,112	0	0	0	302,002	33,556
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	8	16,132	215,177	0	0	0	231,309	28,914
Phosphoric Acid	8	1,083	10	0	0	0	1,093	137
Formaldehyde[C]	7	39,365	1,536	0	0	0	40,901	5,843
Styrene[C]	7	18,422	38,184	0	0	0	56,606	8,087
Diisocyanates	3	170	0	0	0	0	170	57
Trichloroethylene[C]	3	1,470	62,133	0	0	0	63,603	21,201
Cumene	3	2,102	14,186	0	0	0	16,288	5,429
N-hexane	3	32,152	22,486	0	0	0	54,638	18,213
Barium Compounds[M]	2	250	0	0	0	0	250	125
Naphthalene	2	10	200	0	0	0	210	105
Nickel[C, M]	2	0	0	0	0	0	0	0
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	2	0	0	0	0	0	0	0
Chromium Compounds[C, M]	1	0	0	0	0	0	0	0
Chlorodifluoromethane[O]	1	5,483	0	0	0	0	5,483	5,483
Dibutyl Phthalate	1	0	19,858	0	0	0	19,858	19,858
Toluene-2,6-diisocyanate[C]	1	0	0	0	0	0	0	0
Ethylene Glycol	1	3	57	0	0	0	60	60
Maleic Anhydride	1	0	11	0	0	0	11	11
Phenol	1	0	3	0	0	0	3	3
Cyclohexane	1	1	24	0	0	0	25	25
1,2,4-trichlorobenzene	1	10	190	0	0	0	200	200
Tetrachloroethylene[C]	1	16,236	0	0	0	0	16,236	16,236
Dimethyl Phthalate	1	5,300	5,300	0	0	0	10,600	10,600
Toluene-2,4-diisocyanate[C]	1	0	0	0	0	0	0	0
Manganese[M]	1	250	0	0	0	0	250	250
Chromium[M]	1	5	0	0	0	0	5	5
Sulfuric Acid	1	0	0	0	0	0	0	0
	336**	4,748,681	32,868,326	782	0	2,382	37,620,171	111,965

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Wood Furniture and Fixtures Facilities (SIC 25) by Number and Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Toluene	266	3,825	16,916	634,154	152,451	1,460,126	2,267,472	8,524
Xylene (Mixed Isomers)	196	2,071	14,540	1,273,598	74,288	2,324,632	3,689,129	18,822
Methanol	168	1,749	15,480	705,472	30,860	498,109	1,251,920	7,452
Methyl Ethyl Ketone	155	30,229	15,403	322,439	75,831	402,507	846,409	5,461
N-butyl Alcohol	88	25	5	21,996	14,196	79,812	116,034	1,319
Methyl Isobutyl Ketone	65	461	14,502	78,922	40,750	181,165	315,800	4,858
Certain Glycol Ethers	40	12,510	750	23,646	8,541	67,251	112,698	2,817
Ethylbenzene	34	750	13,702	373,132	250	351,736	739,570	21,752
Dichloromethane[C]	14	0	.	23,600	19,700	18,697	61,997	4,428
1,1,1-Trichloroethane[O]	13	0	.	10,185	.	2,434	12,619	971
1,2,4-trimethylbenzene	9	255	.	123,211	.	220,906	344,372	38,264
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	8	0	.	8,039	.	16,182	24,221	3,028
Phosphoric Acid	8	29,823	.	.	8,800	0	38,623	4,828
Formaldehyde[C]	7	250	.	.	250	5	505	72
Styrene[C]	7	0	.	.	250	.	250	36
Diisocyanates	3	0	.	.	.	.	0	0
Trichloroethylene[C]	3	0	.	666	.	.	666	222
Cumene	3	0	.	.	250	8,740	8,990	2,997
N-hexane	3	0	.	.	.	36,184	36,184	12,061
Barium Compounds[M]	2	0	750	1,406	.	.	2,156	1,078
Naphthalene	2	0	.	.	250	.	250	125
Nickel[C, M]	2	308	900	6,200	696	.	8,104	4,052
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	2	0	.	.	.	0	0	0
Chromium Compounds[C, M]	1	20	.	1,400	.	.	1,420	1,420
Chlorodifluoromethane[O]	1	0	.	.	.	.	0	0
Dibutyl Phthalate	1	0	.	504	.	1,465	1,969	1,969
Toluene-2,6-diisocyanate[C]	1	0	.	.	.	.	0	0
Ethylene Glycol	1	0	.	.	.	.	0	0
Maleic Anhydride	1	1,173	.	.	996	.	2,169	2,169
Phenol	1	0	.	.	5	.	5	5
Cyclohexane	1	0	.	.	250	.	250	250
1,2,4-trichlorobenzene	1	0	.	.	250	.	250	250
Tetrachloroethylene[C]	1	0	.	.	.	.	0	0
Dimethyl Phthalate	1	0	.	.	.	.	0	0
Toluene-2,4-diisocyanate[C]	1	0	.	.	.	.	0	0
Manganese[M]	1	0	.	5,800	.	.	5,800	5,800
Chromium[M]	1	0	.	12,000	.	.	12,000	12,000
Sulfuric Acid	1	0	.	.	.	.	0	0
	336**	83,449	92,948	3,626,370	428,864	5,669,951	9,901,832	29,470

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Furniture and Fixtures Facilities Reporting Only SIC 25*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	Peters-Revington Furniture, Delphi, Indiana	746,952
2	J. D. Bassett Mfg. Co., Bassett, Virginia	617,062
3	Singer Furniture Co., Lenoir, North Carolina	615,871
4	Lane Co. Inc., Altavista,Virginia	530,931
5	Stanley Furniture Co., Stanleytown,Virginia	504,289
6	Florida Furniture Ind. Inc., Palatka, Florida	481,000
7	Johnston-Tombigbee Furniture, Columbus, Mississippi	433,086
8	Florida Furniture Ind. Inc., Palatka, Florida	419,000
9	Pulaski Furniture Corp., Dublin,Virginia	410,513
10	Bassett Furniture Ind., Dublin, Georgia	402,762

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 25 or SIC 25 and Other SIC Codes*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	Broyhill Furniture Ind. Inc., Lenoir, North Carolina	2493, 2511	1,227,679
2	Steelcase Inc., Grand Rapids, Michigan	2521, 2522, 2542	1,133,192
3	Peters-Revington Furniture, Delphi, Indiana	2511	746,952
4	J. D. Bassett Mfg. Co., Bassett, Virginia	2511	617,062
5	Singer Furniture Co., Lenoir, North Carolina	2511	615,871
6	Broyhill Furniture Ind. Inc., Lenoir, North Carolina	2511, 2435, 2436	597,794
7	Lane Co. Inc., Altavista, Virginia	2511	530,931
8	Stanley Furniture Co., Stanleytown, Virginia	2511	504,289
9	Florida Furniture Ind. Inc., Palatka, Florida	2511	481,000
10	Aristokraft Inc., Jasper, Indiana	2434, 2517	452,800

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Wood Furniture and Fixtures Facilities (SIC 25) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	51	101%	2%	0%	1%	3%	9%	3%	83%
1995	56	85%	4%	0%	1%	5%	10%	1%	78%
1996	54	---	4%	0%	1%	5%	10%	1%	79%
1997	54	---	4%	0%	1%	5%	10%	1%	79%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Wood Furniture and Fixtures Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	16	14	64	15	2	1	100%	0%	0.02
II	21	15	52	24	2	1	100%	0%	0.02
III	61	51	356	10	10	18	83%	17%	0.05
IV	186	162	1,305	9	25	35	86%	14%	0.03
V	108	78	337	19	15	23	87%	13%	0.07
VI	30	22	96	19	1	2	100%	0%	0.02
VII	21	17	85	15	5	6	67%	33%	0.07
VIII	13	9	30	26	2	2	50%	50%	0.07
IX	33	10	33	60	0	0	0%	0%	--
X	10	8	21	29	3	3	100%	100%	0.14
TOTAL	499	386	2,379	13	65	91	19%	19%	0.04

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Pulp and Paper

1995 TRI Releases for Pulp and Paper Facilities (SICS 2611 - 2631) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Ammonia	197	458,947	11,480,155	2,662,738	0	29,451	14,631,291	74,271
Methanol	175	8,832,019	121,189,529	6,698,626	0	1,289,953	138,010,127	788,629
Hydrochloric Acid	161	14,270	24,262,290	630	0	0	24,277,190	150,790
Chlorine	154	109,835	1,291,237	79,852	0	5	1,480,929	9,616
Sulfuric Acid	148	893	12,913,084	1,161	0	250	12,915,388	87,266
Acetaldehyde[C]	124	540,470	8,250,267	204,670	0	17,385	9,012,792	72,684
Phosphoric Acid	123	578	29	7,917	220	370	9,114	74
Catechol	106	579	505	24,545	0	3,729	29,358	277
Phenol	99	14,209	935,873	15,124	0	8,025	973,231	9,831
Chlorine Dioxide	95	8,666	1,271,494	0	0	0	1,280,160	13,475
Chloroform[C]	81	3,079,137	6,434,460	315,561	0	4,297	9,833,455	121,401
Formic Acid	72	1,958	9,761	0	0	0	11,719	163
Formaldehyde[C]	60	57,371	1,678,059	82,435	0	7,306	1,825,171	30,420
Methyl Ethyl Ketone	58	67,233	1,452,974	41,796	0	4,981	1,566,984	27,017
Nitrate Compounds	54	0	0	7,950,016	0	2,601	7,952,617	147,271
Zinc Compounds[M]	49	31	238,241	347,553	0	2,171,080	2,756,905	56,263
Cresol (Mixed Isomers)	40	4,111	888,000	10,176	0	1,208	903,495	22,587
Nitric Acid	22	32	1,322	0	0	0	1,354	62
Certain Glycol Ethers	19	22,219	110,141	27,394	0	603	160,357	8,440
Chloromethane	16	76	563,300	14	0	5	563,395	35,212
Ethylene Glycol	16	6,699	36,045	36,832	0	1,449	81,025	5,064
Toluene	14	287,724	984,541	2,420	0	2	1,274,687	91,049
Copper Compounds[M]	7	0	261	1,370	0	1,800	3,431	490
Chromium Compounds[C, M]	6	270	1,170	54,100	0	39,505	95,045	15,841
Xylene (Mixed Isomers)	6	3,980	103,325	337	0	0	107,642	17,940
Benzene[C]	5	18	693,800	6	0	2	693,826	138,765
Naphthalene	5	11,788	78,310	965	0	33	91,096	18,219
N-butyl Alcohol	4	32,760	64,511	5,234	0	0	102,505	25,626
Dichloromethane[C]	4	163,019	54,491	172	0	5	217,687	54,422
Styrene[C]	4	11,890	101,796	285	0	0	113,971	28,493
Dazomet	4	630	370	230	0	0	1,230	308
Antimony Compounds[M]	3	0	0	0	0	250	250	83
Barium Compounds[M]	3	0	500	8,930	0	35,265	44,695	14,898
1,2,4-trimethylbenzene	3	28,500	8,050	500	0	750	37,800	12,600
Diethanolamine	3	540	2,060	700	0	0	3,300	1,100
Decabromodiphenyl Oxide	3	0	0	0	0	500	500	167
Manganese Compounds[M]	2	8	6	470	0	0	484	242
Nickel Compounds[C, M]	2	0	750	250	0	90,000	91,000	45,500
Acrylic Acid	2	1	300	36	0	0	337	169
Methyl Isobutyl Ketone	2	50	23,520	0	0	1	23,571	11,786
N-hexane	2	166,918	160,588	0	0	0	327,506	163,753
Propylene	2	0	36,000	0	0	0	36,000	18,000
Potassium Dimethyldithiocarbamate	2	0	0	5	0	0	5	3
Sodium Dimethyldithiocarbamate	2	0	0	0	0	0	0	0
Manganese[M]	2	5	1,175	69,431	0	0	70,611	35,306
Copper[M]	2	0	1,900	298	0	1,810	4,008	2,004
Sodium Nitrite	2	0	45,000	0	0	0	45,000	22,500
Hydrogen Fluoride	2	0	86,896	0	0	0	86,896	43,448
Ozone	2	5	0	0	0	0	5	3
C.I. Direct Blue 218	2	0	0	6	0	0	6	3
Mercury Compounds[M]	1	1,000	450	110	0	0	1,560	1,560
Nicotine and Salts	1	4,823	3,029	750	0	0	8,602	8,602
Polychlorinated Alkanes	1	0	0	0	0	0	0	0
Chlorodifluoromethane[O]	1	14,000	0	0	0	0	14,000	14,000
Dichlorodifluoromethane[O]	1	10,000	0	0	0	0	10,000	10,000
Dibutyl Phthalate	1	0	0	0	0	0	0	0
Biphenyl	1	5,000	0	80	0	0	5,080	5,080
O-xylene	1	3	48,000	0	0	1	48,004	48,004
Ethylbenzene	1	510	70	0	0	0	580	580

1995 TRI Releases for Pulp and Paper Facilities (SICS 2611 - 2631) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Acrolein	1	0	54,000	0	0	0	54,000	54,000
Maleic Anhydride	1	210	230	0	0	0	440	440
Nabam	1	0	0	0	0	0	0	0
Asbestos (Friable)[C]	1	1	1	1	0	0	3	3
Mercury[M]	1	0	0	0	0	0	0	0
Silver[M]	1	0	0	0	0	0	0	0
Antimony[M]	1	0	0	0	0	250	250	250
Zinc (Fume or Dust)[M]	1	0	367,965	1,309	0	240,950	610,224	610,224
	305**	13,962,986	195,929,831	18,735,235	220	3,953,822	232,582,094	762,564

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers For Pulp and Paper Facilities (SICS 2611 - 2631) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg. Transfer Per Facility
Ammonia	197	706,520	26,692	.	7,092	.	740,304	3,758
Methanol	175	39,983,720	144,339	3,436,333	7,454,726	98,735	51,118,103	292,103
Hydrochloric Acid(Acid " Aerosols" Only)	161	250	255	.	12,500	.	13,005	81
Chlorine	154	14,261	0	.	0	.	14,261	93
Sulfuric Acid	148	10	5	200	300	.	515	3
Acetaldehyde[C]	124	82,996	601	5	26,384	14,870	124,856	1,007
Phosphoric Acid	123	1,392	0	.	573	.	1,965	16
Catechol	106	76,104	443	.	774	90,363	167,684	1,582
Phenol	99	204,490	3,116	5	6,265	14,005	227,881	2,302
Chlorine Dioxide	95	0	0	.	0	.	0	0
Chloroform[C]	81	306,379	3,159	250	12,165	.	321,953	3,975
Formic Acid	72	253,432	90	.	0	.	253,522	3,521
Formaldehyde[C]	60	39,773	17,306	.	45,310	3,147	105,536	1,759
Methyl Ethyl Ketone	58	23,600	965	23,962	16,505	15,500	80,532	1,388
Nitrate Compounds	54	8,559	13,065	.	.	.	21,624	400
Zinc Compounds[M]	49	35,930	1,726,814	14,000	249,352	.	2,026,096	41,349
Cresol (Mixed Isomers)	40	2,419	541	.	1,800	3,150	7,910	198
Nitric Acid	22	0	.	.	660	.	660	30
Certain Glycol Ethers	19	20,042	575	.	45,301	.	65,918	3,469
Chloromethane	16	250	0	.	5	.	255	16
Ethylene Glycol	16	21,885	230	.	11	.	22,126	1,383
Toluene	14	0	10	9,726	8,034	394,852	412,622	29,473
Copper Compounds[M]	7	1,897	40,980	6,522	.	.	49,649	7,093
Chromium Compounds[C, M]	6	950	19,775	.	.	.	20,725	3,454
Xylene (Mixed Isomers)	6	0	.	391	420	7,765	8,576	1,429
Benzene[C]	5	0	.	.	.	.	0	0
Naphthalene	5	0	.	53,000	.	.	53,000	10,600
N-butyl Alcohol	4	0	.	.	35,342	.	35,342	8,836
Dichloromethane[C]	4	0	10	.	.	.	10	3
Styrene[C]	4	0	10	.	.	.	10	3
Dazomet	4	0	.	.	0	.	0	0
Antimony Compounds[M]	3	250	12,800	.	.	.	13,050	4,350
Barium Compounds[M]	3	0	41,015	2,500	.	.	43,515	14,505
1,2,4-trimethylbenzene	3	250	255	250	2,100	.	2,855	952
Diethanolamine	3	51,000	61	.	17	.	51,078	17,026
Decabromodiphenyl Oxide	3	750	28,029	.	.	.	28,779	9,593
Manganese Compounds[M]	2	0	16,557	.	.	.	16,557	8,279
Nickel Compounds[C, M]	2	0	94,000	.	.	.	94,000	47,000
Acrylic Acid	2	0	.	.	.	.	0	0
Methyl Isobutyl Ketone	2	0	.	.	.	.	0	0
N-hexane	2	0	.	.	287	18,528	18,815	9,408
Propylene	2	0	.	.	.	.	0	0
Potassium Dimethyldithiocarbamate	2	0	.	.	.	.	0	0
Sodium Dimethyldithiocarbamate	2	0	.	.	.	.	0	0
Manganese[M]	2	0	27,412	.	.	.	27,412	13,706
Copper[M]	2	0	.	.	.	.	0	0
Sodium Nitrite	2	0	.	.	.	.	0	0
Hydrogen Fluoride	2	0	.	.	.	.	0	0
Ozone	2	0	.	.	.	.	0	0
C.I. Direct Blue 218	2	73	1,400	.	.	.	1,473	737
Mercury Compounds[M]	1	0	1,511	.	.	.	1,511	1,511
Nicotine and Salts	1	0	6,043	.	.	.	6,043	6,043
Polychlorinated Alkanes	1	0	231,700	.	.	.	231,700	231,700
Chlorodifluoromethane[O]	1	0	.	.	.	.	0	0
Dichlorodifluoromethane[O]	1	0	.	.	.	.	0	0
Dibutyl Phthalate	1	0	.	.	.	2,082	2,082	2,082
Biphenyl	1	0	560	.	.	.	560	560
O-xylene	1	0	.	.	.	.	0	0
Ethylbenzene	1	0	.	.	100	850	950	950

1995 TRI Transfers For Pulp and Paper Facilities (SICS 2611 - 2631) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg. Transfer Per Facility
Acrolein	1	0	.	.	.	.	0	0
Maleic Anhydride	1	0	.	.	.	.	0	0
Nabam	1	0	.	.	.	.	0	0
Asbestos (Friable)[C]	1	0	10,478	.	.	.	10,478	10,478
Mercury[M]	1	0	.	.	4	.	4	4
Silver[M]	1	0	.	.	2	.	2	2
Antimony[M]	1	250	.	.	.	.	250	250
Zinc (Fume or Dust)[M]	1	0	.	.	.	.	0	0
	305**	41,865,048	2,470,802	3,547,144	7,926,029	663,847	56,473,370	185,159

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Pulp and Paper Facilities Reporting Only SICS 2611 - 2631*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	Westvaco Corp., Covington, Virginia	4,753,321
2	Finch Pruyn & Co. Inc., Glens Falls, New York	4,561,665
3	Champion Intl. Corp., Canton, North Carolina	4,404,470
4	Westvaco Corp., North Charleston, South Carolina	3,834,983
5	Federal Paper Board Co. Inc., Riegelwood, North Carolina	3,714,811
6	International Paper, Georgetown, South Carolina	3,361,778
7	Mead Coated Board Inc., Cottonton, Alabama	3,356,653
8	International Paper, Mansfield, Louisiana	3,191,457
9	Great Southern Paper, Cedar Springs, Georgia	3,156,127
10	Inland Container Corp., Rome, Georgia	3,082,005

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SICS 2611 - 2631 or SICS 2611 - 2631 and Other SIC Codes*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	Weyerhaeuser Co., Longview, Washington	2421, 2429, 2493, 2611, 2621, 2812	5,705,746
2	Westvaco Corp., Covington, Virginia	2631	4,753,321
3	Finch Pruyn & Co. Inc., Glens Falls, New York	2611, 2621	4,561,665
4	Champion Intl. Corp., Canton, North Carolina	2621	4,404,470
5	Westvaco Corp., North Charleston, South Carolina	2611, 2631	3,834,983
6	Federal Paper Board Co. Inc., Riegelwood, North Carolina	2611, 2621, 2631	3,714,811
7	International Paper, Georgetown, South Carolina	2611, 2621	3,361,778
8	Mead Coated Board Inc., Cottonton, Alabama	2631	3,356,653
9	International Paper, Mansfield, Louisiana	2631	3,191,457
10	Great Southern Paper, Cedar Springs, Georgia	2631	3,156,127

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Pulp and Paper Facilities (SICs 2611-2631) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	1,930	15%	3%	10%	72%	0%	0%	3%	12%
1995	1,744	17%	2%	11%	71%	0%	0%	3%	14%
1996	1,818	---	2%	10%	72%	0%	0%	3%	13%
1997	1,764	---	2%	11%	71%	0%	0%	3%	14%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity.*

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Pulp and Paper Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	54	52	433	7	16	32	50%	50%	0.07
II	32	28	291	7	14	52	88%	12%	0.18
III	44	41	606	4	11	46	98%	2%	0.08
IV	113	99	1,382	5	31	138	88%	12%	0.10
V	147	122	948	9	30	54	48%	52%	0.06
VI	32	31	386	5	24	47	77%	23%	0.12
VII	10	9	54	11	1	1	100%	0%	0.02
VIII	2	2	32	4	1	4	0%	100%	0.13
IX	22	18	135	10	5	13	92%	8%	0.10
X	28	28	363	5	17	91	85%	15%	0.25
TOTAL	484	430	4,630	6	150	478	80%	20%	0.10

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Printing

1995 TRI Releases for Printing Facilities (2711 - 2789) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Toluene	106	15,454,685	11,321,925	58	0	172	26,776,840	252,612
Certain Glycol Ethers	82	535,072	649,284	260	0	0	1,184,616	14,447
Methyl Ethyl Ketone	63	652,508	1,462,006	0	0	379	2,114,893	33,570
Xylene (Mixed Isomers)	47	733,336	748,137	271	0	1,167	1,482,911	31,551
Zinc Compounds[M]	28	5	122	306	0	1,800	2,233	80
Copper[M]	23	0	34,144	45	0	0	34,189	1,486
Methanol	21	292,262	79,455	0	0	0	371,717	17,701
Methyl Isobutyl Ketone	18	87,271	291,732	0	0	189	379,192	21,066
Barium Compounds[M]	14	755	190	0	0	0	945	68
N-hexane	12	60,722	48,339	0	0	0	109,061	9,088
Copper Compounds[M]	11	0	0	37	0	0	37	3
1,2,4-trimethylbenzene	10	76,540	3,399	0	0	0	79,939	7,994
Ethylene Glycol	10	57,129	40,305	0	0	4,240	101,674	10,167
1,1,1-Trichloroethane[O]	9	191,203	207,530	0	0	0	398,733	44,304
N-butyl Alcohol	8	46,066	46,949	0	0	0	93,015	11,627
Dibutyl Phthalate	7	0	13,602	0	0	0	13,602	1,943
Ethylbenzene	7	17,848	32,582	0	0	0	50,430	7,204
Nitric Acid	7	255	1,054	13,401	0	0	14,710	2,101
Ammonia	6	10	38,537	0	0	0	38,547	6,425
Tetrachloroethylene[C]	4	64,500	10,874	0	0	0	75,374	18,844
N-methyl-2-pyrrolidone	4	46,369	22,374	0	0	0	68,743	17,186
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	3	38,210	21,053	0	0	0	59,263	19,754
Dichloromethane[C]	3	24,700	105,788	0	0	0	130,488	43,496
Trichloroethylene[C]	3	9,500	19,578	0	0	0	29,078	9,693
Nickel[C, M]	3	5	0	0	0	0	5	2
Ozone	3	8,260	112,416	0	0	0	120,676	40,225
Diisocyanates	2	0	755	0	0	0	755	378
Formaldehyde[C]	2	606	906	0	0	0	1,512	756
Phenol	2	2,190	2,690	0	0	0	4,880	2,440
2-ethoxyethanol	2	23,345	0	0	0	0	23,345	11,673
1,4-Dioxane[C]	2	3,000	14,016	0	0	0	17,016	8,508
Barium[M]	2	0	28,600	0	0	0	28,600	14,300
Chromium[M]	2	5	0	0	0	0	5	3
Antimony Compounds[M]	1	0	429	0	0	0	429	429
Cadmium Compounds[C, M]	1	0	60	0	0	0	60	60
Cyanide Compounds	1	97	0	0	0	0	97	97
Manganese Compounds[M]	1	5	0	0	0	0	5	5
Diethyl Sulfate[C]	1	597	5	0	0	0	602	602
Dimethyl Sulfate[C]	1	31	7	0	0	0	38	38
Phthalic Anhydride	1	0	58	0	0	0	58	58
Naphthalene	1	22,070	2,728	0	0	0	24,798	24,798
M-cresol	1	11	2	0	0	0	13	13
Di(2-ethylhexyl) Phthalate[C]	1	0	5	0	0	0	5	5
Triethylamine	1	250	16,800	0	0	0	17,050	17,050
Hydroquinone	1	0	5	0	0	0	5	5
Ethyl Acrylate[C]	1	1,328	158	0	0	0	1,486	1,486
Lead[C, M]	1	0	0	0	0	250	250	250
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	1	0	30,131	0	0	0	30,131	30,131
Sulfuric Acid	1	0	250	0	0	0	250	250
Chlorine	1	0	23,863	0	0	0	23,863	23,863
	262**	18,450,746	15,432,923	14,378	0	8,197	33,906,244	129,413

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Printing Facilities (SICS 2711 - 2789) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Toluene	106	6,147	15,440	4,050,982	160,932	1,923,151	6,156,652	58,082
Certain Glycol Ethers	82	117,549	97,360	30,904	56,609	667,830	970,252	11,832
Methyl Ethyl Ketone	63	17	1,000	219,801	204,375	1,107,789	1,532,982	24,333
Xylene (Mixed Isomers)	47	190	250	227,276	26,322	279,100	533,138	11,343
Zinc Compounds[M]	28	688	3,393	21,275	10,344	16,932	52,632	1,880
Copper[M]	23	808	1,002	330,668	37,377	31,785	401,640	17,463
Methanol	21	10,005	3,964	5,128	.	17,322	36,419	1,734
Methyl Isobutyl Ketone	18	0	1,250	27,951	42,459	62,989	138,515	7,695
Barium Compounds[M]	14	27	531	7,176	1,040	750	9,524	680
N-hexane	12	0	.	3,643	.	21,646	25,289	2,107
Copper Compounds[M]	11	643	2,600	26,714	139	500	30,596	2,781
1,2,4-trimethylbenzene	10	0	1,140	15,894	10,129	44,394	71,557	7,156
Ethylene Glycol	10	12,568	3,150	.	18,746	.	34,464	3,446
1,1,1-Trichloroethane[O]	9	255	.	10,018	.	75,275	85,548	9,505
N-butyl Alcohol	8	0	.	2,157	1,848	10,887	14,892	1,862
Dibutyl Phthalate	7	0	400	3,064	2,250	11,237	16,951	2,422
Ethylbenzene	7	170	.	.	514	19,567	20,251	2,893
Nitric Acid	7	25,051	.	.	255	.	25,306	3,615
Ammonia	6	0	.	500	143	.	643	107
Tetrachloroethylene[C]	4	0	18	20,448	10,062	29,187	59,715	14,929
N-methyl-2-pyrrolidone	4	0	.	13,243	.	49,192	62,435	15,609
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	3	0	1,134	12,076	.	14,046	27,256	9,085
Dichloromethane[C]	3	0	.	.	9,091	379	9,470	3,157
Trichloroethylene[C]	3	0	0	8,116	.	.	8,116	2,705
Nickel[C, M]	3	5	.	22,504	1,200	.	23,709	7,903
Ozone	3	0	.	.	.	.	0	0
Diisocyanates	2	0	.	.	.	.	0	0
Formaldehyde[C]	2	0	.	.	.	.	0	0
Phenol	2	0	.	.	.	.	0	0
2-ethoxyethanol	2	0	12,345	.	.	6,000	18,345	9,173
1,4-Dioxane[C]	2	0	5	.	250	500	755	378
Barium[M]	2	0	.	.	.	.	0	0
Chromium[M]	2	0	5	.	5	.	10	5
Antimony Compounds[M]	1	0	.	3,468	406	557	4,431	4,431
Cadmium Compounds[C, M]	1	0	.	2,273	.	.	2,273	2,273
Cyanide Compounds	1	9	.	.	226	.	235	235
Lead Compounds[C, M]	1	18	.	5,268	76	426	5,788	5,788
Manganese Compounds[M]	1	0	250	.	.	.	250	250
Diethyl Sulfate[C]	1	0	.	.	.	.	0	0
Dimethyl Sulfate[C]	1	0	.	.	.	.	0	0
Phthalic Anhydride	1	0	.	.	.	.	0	0
Naphthalene	1	0	.	9,557	.	.	9,557	9,557
M-cresol	1	0	19	.	.	.	19	19
Di(2-ethylhexyl) Phthalate[C]	1	0	6,400	.	.	.	6,400	6,400
Triethylamine	1	0	.	.	.	250	250	250
Hydroquinone	1	1,638	.	.	.	.	1,638	1,638
Ethyl Acrylate[C]	1	0	.	.	.	.	0	0
Lead[C, M]	1	0	.	40,433	.	.	40,433	40,433
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	1	0	.	.	.	.	0	0
Sulfuric Acid	1	0	.	.	.	.	0	0
Chlorine	1	0	.	.	.	.	0	0
	262**	175,788	151,656	5,120,537	594,798	4,391,691	10,438,336	39,841

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Printing Facilities Reporting Only SIC 2711-2789*		
Rank	Facility[1]	Total TRI Releases in Pounds
1	Quebecor Printing Inc., Dickson, Tenness	2,470,345
2	R. R. Donnelley & Sons Co., Warsaw, Indiana	2,109,441
3	World Color, Corinth, Mississippi	1,633,920
4	Quebecor Printing, Richmond, Virginia	1,390,514
5	R. R. Donnelley & Sons Co., Gallatin, Tennessee	1,371,130
6	World Color Press Inc., Dyersburg, Tennessee	1,363,008
7	R. R. Donnelley Printing Co., Lynchburg, Virginia	1,290,000
8	World Color Press Inc., Salem, Illinois	1,200,800
9	Brown Printing Co., Franklin, Kentucky	1,124,838
10	Quebecor Printing Memphis Inc., Memphis, Tennessee	1,116,925

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SICS 2711 - 2789 or SICS 2711 - 2789 and Other SIC Codes*			
Rank	Facility[1]	SIC Codes Reported in TRI	Total TRI Releases in Pounds
1	Quebecor Printing Inc., Dickson, Tennessee	2754	2,470,345
2	R. R. Donnelley & Sons Co., Warsaw, Indiana	2754	2,109,441
3	World Color, Corinth, Mississippi	2752, 2754	1,633,920
4	Quebecor Printing, Richmond, Virginia	2754	1,390,514
5	R. R. Donnelley & Sons Co., Gallatin, Tennessee	2754	1,371,130
6	World Color Press Inc., Dyersburg, Tennessee	2752, 2754	1,363,008
7	R. R. Donnelley Printing Co., Lynchburg, Virginia	2754	1,290,000
8	World Color Press Inc., Salem, Illinois	2752, 2754	1,200,800
9	Brown Printing Co., Franklin, Kentucky	2754	1,124,838
10	Quebecor Printing Memphis Inc., Memphis, Tennessee	2754	1,116,925

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Printing Facilities (SICs 2711-2789) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	308	16%	66%	0%	19%	2%	1%	0%	11%
1995	310	14%	64%	0%	22%	2%	1%	0%	10%
1996	314	---	63%	0%	24%	2%	1%	0%	10%
1997	318	---	62%	0%	26%	2%	%	0%	9%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Printing Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	500	168	392	77	21	27	85%	15%	0.07
II	438	220	707	37	35	93	96%	4%	0.13
III	1,137	359	1,534	44	31	44	91%	9%	0.03
IV	1,308	442	2,142	37	56	129	94%	6%	0.06
V	675	402	1,416	29	40	51	63%	37%	0.04
VI	535	99	282	114	24	44	84%	16%	0.16
VII	558	178	702	48	16	21	81%	19%	0.03
VIII	224	104	184	73	3	3	67%	33%	0.02
IX	239	67	247	58	7	10	100%	0%	0.04
X	248	53	85	175	5	6	67%	33%	0.07
TOTAL	5,862	2,092	7,691	46	238	428	88%	12%	0.06

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Inorganic Chemicals

1995 TRI Releases for Inorganic Chemicals Facilities (SIC 281) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Ammonia	123	1,597,708	1,605,480	213,435	110,000	1,060,206	4,586,829	37,291
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	109	56,554	1,295,978	723	6,594,743	84	7,948,082	72,918
Chlorine	107	44,872	2,621,681	20,363	0	5,637	2,692,553	25,164
Sulfuric Acid	91	52,538	462,167	500	0	4,138	519,343	5,707
Phosphoric Acid	59	4,560	384,125	10	0	30	388,725	6,589
Nitric Acid	51	8,901	90,632	0	0	1,500	101,033	1,981
Zinc Compounds[M]	49	39,765	75,039	99,795	0	155,229	369,828	7,548
Chromium Compounds[C, M]	32	2,065	15,680	14,390	0	17,010,946	17,043,081	532,596
Copper Compounds[M]	30	1,869	12,773	303	0	89	15,034	501
Manganese Compounds[M]	28	161,433	115,867	176,398	0	7,630,441	8,084,139	288,719
Nickel Compounds[C, M]	28	1,807	15,087	7,396	0	35,365	59,655	2,131
Methanol	27	188,354	1,070,201	3,838	0	13	1,262,406	46,756
Lead Compounds[C, M]	25	33,198	10,721	94	0	6	44,019	1,761
Hydrogen Fluoride	23	81,736	71,241	37	0	5,310	158,324	6,884
Ethylene Glycol	20	540	1,460	1,688	0	185	3,873	194
Barium Compounds[M]	19	2,086	8,625	7,424	0	116,000	134,135	7,060
Nitrate Compounds	18	2	5	1,570,573	0	1,142,964	2,713,544	150,752
Antimony Compounds[M]	17	1,391	11,981	29	0	1	13,402	788
Toluene	17	14,176	11,423	0	0	0	25,599	1,506
Cobalt Compounds[C, M]	15	518	1,714	150	0	56,000	58,382	3,892
Dichlorodifluoromethane[O]	15	336,838	21,167	0	0	0	358,005	23,867
Propylene	13	4,308	1,957	0	0	0	6,265	482
Phosphorus (Yellow or White)	13	1,200	4,256	5	0	1	5,462	420
Molybdenum Trioxide	12	1,408	13,618	3,753	0	52	18,831	1,569
Xylene (Mixed Isomers)	12	1,183	2,158	0	0	0	3,341	278
Carbonyl Sulfide	11	500	8,772,850	0	0	0	8,773,350	797,577
Titanium Tetrachloride	11	5,784	3,182	0	0	0	8,966	815
Mercury[M]	9	5,962	2,775	136	0	1,014	9,887	1,099
Arsenic Compounds[C, M]	8	44	217	18	0	14,015	14,294	1,787
Ethylene	8	211,816	9,383	0	0	0	221,199	27,650
Ethylene Oxide[C]	8	5,175	15,355	0	0	0	20,530	2,566
Cadmium Compounds[C, M]	7	1,160	9,243	15	0	0	10,418	1,488
Certain Glycol Ethers	7	7,920	47,882	0	0	0	55,802	7,972
Formaldehyde[C]	7	262	11,305	0	0	0	11,567	1,652
Naphthalene	7	320	9,250	48	0	5	9,623	1,375
Copper[M]	7	270	1,000	5	0	0	1,275	182
Zinc (Fume or Dust)[M]	7	5,874	26,895	911	0	0	33,680	4,811
Sodium Nitrite	7	6,405	14,856	145,322	0	0	166,583	23,798
Carbon Tetrachloride[C, O]	6	4,286	2,279	0	0	0	6,565	1,094
Formic Acid	6	45	128,249	0	0	0	128,294	21,382
Carbon Disulfide	6	111,461	3,741	250	0	0	115,452	19,242
Asbestos (Friable)[C]	6	0	1	0	0	0	1	0
Chlorodifluoromethane[O]	5	368,505	271,174	0	0	0	639,679	127,936
Nickel[C, M]	5	38	755	10	0	0	803	161
Cyanide Compounds	4	0	0	0	0	0	0	0
Selenium Compounds[M]	4	40	10,065	2	0	0	10,107	2,527
Benzene[C]	4	701	71,280	0	0	0	71,981	17,995
Chloromethane	4	527	5,269	0	0	0	5,796	1,449
Dichloromethane[C]	4	14,205	13,317	0	0	0	27,522	6,881
N-hexane	4	117	4,627	0	0	0	4,744	1,186
Diethanolamine	4	271	750	700	0	0	1,721	430
Lithium Carbonate	4	1,006	5,839	0	0	0	6,845	1,711
Aluminum (Fume or Dust)[M]	4	42	3,530	5	0	0	3,577	894
Manganese[M]	4	295	274	1,252	0	2,196,245	2,198,066	549,517
Chromium[M]	4	5	8	27	0	290,600	290,640	72,660
Bromine	4	63	8,213	0	0	0	8,276	2,069
Fluorine	4	0	14,200	0	0	0	14,200	3,550
Chloroform[C]	3	8,752	2,818	970	0	0	12,540	4,180
Acetonitrile	3	756	846	0	0	0	1,602	534
Trichlorofluoromethane[O]	3	87,000	17,789	0	0	0	104,789	34,930
Dichlorotetrafluoroethane (CFC-114)[O]	3	640,000	44,000	0	0	0	684,000	228,000
Methyl Ethyl Ketone	3	815	203	0	0	0	1,018	339
Phenol	3	19	251	0	0	0	270	90
Hydrazine[C]	3	318	0	0	0	0	318	106
N-methyl-2-pyrrolidone	3	3	387	0	0	0	390	130

1995 TRI Releases for Inorganic Chemicals Facilities (SIC 281) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Lead[C, M]	3	1	5	273	0	490	769	256
Cobalt[C, M]	3	263	42	0	0	33,900	34,205	11,402
Silver Compounds[M]	2	0	5	0	0	0	5	3
N-butyl Alcohol	2	6	0	0	0	0	6	3
Hydrogen Cyanide	2	0	258	0	0	0	258	129
Acetaldehyde[C]	2	2	2,200	0	0	0	2,202	1,101
Monochloropentafluoroethane[O]	2	33,000	250	0	0	0	33,250	16,625
1,2,4-trimethylbenzene	2	610	258	0	0	5	873	437
Ethylbenzene	2	5	240	0	0	0	245	123
1,3-butadiene[C]	2	1	0	0	0	0	1	1
Hydroquinone	2	0	0	0	0	0	0	0
2,2-dichloro-1,1,1-trifluoroethane[O]	2	46,460	0	0	0	0	46,460	23,230
2-chloro-1,1,1,2-tetrafluoroethane[O]	2	66,005	7,168	0	0	0	73,173	36,587
Boron Trifluoride	2	325	1,600	0	0	0	1,925	963
Mercury Compounds[M]	1	0	0	0	0	0	0	0
Aniline	1	1	0	0	0	0	1	1
Chloroethane	1	425	1,200	0	0	0	1,625	1,625
Vinyl Chloride[C]	1	0	0	0	0	0	0	0
Dichlorofluoromethane	1	8,600	130,000	0	0	0	138,600	138,600
Propylene Oxide[C]	1	0	0	0	0	0	0	0
Tert-butyl Alcohol	1	5	0	0	0	0	5	5
1-chloro-1,1-difluoroethane[O]	1	1,100	250	0	0	0	1,350	1,350
Chloropicrin	1	250	250	0	0	0	500	500
Freon 113[O]	1	25,000	0	.	0	0	25,000	25,000
Dimethyl Sulfate[C]	1	0	0	0	0	0	0	0
Isobutyraldehyde	1	1	0	0	0	0	1	1
Trichloroethylene[C]	1	0	0	0	0	0	0	0
Acrylamide[C]	1	1	0	0	0	0	1	1
Peracetic Acid	1	0	2,500	0	0	0	2,500	2,500
Phthalic Anhydride	1	0	1	0	0	0	1	1
Biphenyl	1	0	1	0	0	0	1	1
Cumene	1	3	3	0	0	0	6	6
Styrene[C]	1	1	0	0	0	0	1	1
Acrylonitrile[C]	1	1	0	0	0	0	1	1
Vinyl Acetate[C]	1	1	1	0	0	0	2	2
Chlorobenzene	1	1	0	0	0	0	1	1
Cyclohexane	1	1	0	0	0	0	1	1
Catechol	1	0	0	0	0	0	0	0
1,2,4-trichlorobenzene	1	1	1	0	0	0	2	2
Triethylamine	1	0	250	0	0	0	250	250
1,4-Dioxane[C]	1	5	0	0	0	0	5	5
Dimethylamine	1	250	5	0	0	0	255	255
Sodium Dimethyldithiocarbamate	1	0	0	0	0	0	0	0
Dimethyl Phthalate	1	1,250	0	.	0	0	1,250	1,250
Captan	1	5	0	0	0	0	5	5
1-chloro-1,1,2,2-tetrafluoroethane[O]	1	1,800	250	0	0	0	2,050	2,050
Thorium Dioxide	1	0	1	0	0	0	1	1
Cresol (Mixed Isomers)	1	33	330	0	0	0	363	363
Silver[M]	1	2	3	0	0	0	5	5
Antimony[M]	1	0	13,000	0	0	0	13,000	13,000
Arsenic[C, M]	1	0	0	0	0	0	0	0
Beryllium[C, M]	1	0	0	0	0	0	0	0
Selenium[M]	1	0	0	0	0	0	0	0
Phosphine	1	0	1,239	0	0	0	1,239	1,239
Boron Trichloride	1	0	5	0	0	0	5	5
Sodium Azide	1	250	5	0	0	0	255	255
	413**	4,315,437	17,620,415	2,270,848	6,704,743	29,760,471	60,671,914	146,905

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Inorganic Chemicals Facilities (SIC 281) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg Transfer Per Facility
Ammonia	123	2,571,517	41,878	1,057,480	94,326	.	3,765,201	30,611
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	109	658	0	.	2,070	.	2,728	25
Chlorine	107	35,401	.	.	309	.	35,710	334
Sulfuric Acid	91	0	12	.	191,050	.	191,062	2,100
Phosphoric Acid	59	345	1,129	159,712	242,396	.	403,582	6,840
Nitric Acid	51	255	0	5,800	291,969	.	298,024	5,844
Zinc Compounds[M]	49	4,902	993,281	44,708	848,975	.	1,891,866	38,610
Chromium Compounds[C, M]	32	5,759	134,876	20,696	172,306	.	333,637	10,426
Copper Compounds[M]	30	9,827	312,352	1,192,110	208,175	5	1,722,469	57,416
Manganese Compounds[M]	28	3,199	3,715,804	5	2,027,491	.	5,746,499	205,232
Nickel Compounds[C, M]	28	13,674	119,152	274,406	9,753	.	416,985	14,892
Methanol	27	156,152	836	7,926	109,297	25,067	394,972	14,629
Lead Compounds[C, M]	25	1,845	12,736	1,355,392	341,114	.	1,711,087	68,443
Hydrogen Fluoride	23	255	20	31,500	32,482	.	64,257	2,794
Ethylene Glycol	20	5,441	6	5,116	461	15,497	26,521	1,326
Barium Compounds[M]	19	6,385	292,652	270	20,503	250	320,060	16,845
Nitrate Compounds	18	1,527,332	3,010	425,929	317,294	.	2,273,565	126,309
Antimony Compounds[M]	17	5,207	64,230	45,900	11,860	.	138,027	8,119
Toluene	17	255	.	225	1,067	12,100	13,647	803
Cobalt Compounds[C, M]	15	482	19,196	6,697	12,134	.	38,509	2,567
Dichlorodifluoromethane[O]	15	0	.	1,700	4,055	.	5,755	384
Propylene	13	0	.	.	.	.	0	0
Phosphorus (Yellow or White)	13	0	1	.	14	.	15	1
Molybdenum Trioxide	12	20,146	221,500	145,814	.	.	387,460	32,288
Xylene (Mixed Isomers)	12	0	.	445	8,919	202,409	211,773	17,648
Carbonyl Sulfide	11	0	.	.	.	.	0	0
Titanium Tetrachloride	11	0	.	.	2,854	.	2,854	259
Mercury[M]	9	0	415	7,752	11,580	.	20,618	2,291
Arsenic Compounds[C, M]	8	9	3,697	.	37,924	.	41,630	5,204
Ethylene	8	0	.	.	.	.	0	0
Ethylene Oxide[C]	8	0	.	.	.	.	0	0
Cadmium Compounds[C, M]	7	34	10,664	255	2,081	.	13,034	1,862
Certain Glycol Ethers	7	5	.	.	20,269	7,011	27,285	3,898
Formaldehyde[C]	7	5	.	.	0	.	5	1
Naphthalene	7	124	260	.	1,394	5	1,783	255
Copper[M]	7	111	216,632	.	23,158	.	239,901	34,272
Zinc (Fume or Dust)[M]	7	46	6,163	250	48,002	.	54,461	7,780
Sodium Nitrite	7	223,262	.	4,350	11,000	.	238,612	34,087
Carbon Tetrachloride[C, O]	6	0	700	500	12,844	.	14,044	2,341
Formic Acid	6	255	.	.	5	.	260	43
Carbon Disulfide	6	0	500	.	500	5,105	6,105	1,018
Asbestos (Friable)[C]	6	0	51,743	.	.	.	51,743	8,624
Chlorodifluoromethane[O]	5	0	13,000	.	470	.	13,470	2,694
Nickel[C, M]	5	54	302	24,170	.	.	24,526	4,905
Cyanide Compounds	4	1	.	.	5	.	6	2
Selenium Compounds[M]	4	12	1,248	.	250	.	1,510	378
Benzene[C]	4	0	4	.	1,720	.	1,724	431
Chloromethane	4	0	.	.	3	.	3	1
Dichloromethane[C]	4	0	.	11,000	2	5	11,007	2,752
N-hexane	4	0	.	.	.	.	0	0
Diethanolamine	4	650	.	.	.	.	650	163
Lithium Carbonate	4	0	3,400	.	.	.	3,400	850
Aluminum (Fume or Dust)[M]	4	5	.	.	.	.	5	1
Manganese[M]	4	0	2,261	.	.	.	2,261	565
Chromium[M]	4	0	637	.	6,276	.	6,913	1,728
Bromine	4	0	.	.	.	.	0	0
Fluorine	4	0	.	.	.	.	0	0
Chloroform[C]	3	0	2,200	.	130,705	.	132,905	44,302
Acetonitrile	3	0	.	.	.	100,000	100,000	33,333
Trichlorofluoromethane[O]	3	0	.	51,590	37,500	.	89,090	29,697
Dichlorotetrafluoroethane (CFC-114)[O]	3	0	.	.	.	.	0	0
Methyl Ethyl Ketone	3	0	.	.	20,115	189	20,304	6,768
Phenol	3	0	.	.	.	.	0	0
Hydrazine[C]	3	0	.	.	.	.	0	0
N-methyl-2-pyrrolidone	3	0	.	471	142	18,563	19,176	6,392

1995 TRI Transfers for Inorganic Chemicals Facilities (SIC 281) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg Transfer Per Facility
Lead[C, M]	3	0	250	43,000	426	.	43,676	14,559
Cobalt[C, M]	3	4	9	2,044	.	.	2,057	686
Silver Compounds[M]	2	5	5	.	0	.	10	5
N-butyl Alcohol	2	0	.	.	0	.	0	0
Hydrogen Cyanide	2	0	.	.	.	.	0	0
Acetaldehyde[C]	2	0	.	.	.	.	0	0
Monochloropentafluoroethane[O]	2	0	.	.	.	.	0	0
1,2,4-trimethylbenzene	2	0	.	.	3,172	155	3,327	1,664
Ethylbenzene	2	0	.	.	0	.	0	0
1,3-butadiene[C]	2	0	.	.	.	.	0	0
Hydroquinone	2	67	.	.	.	.	67	34
2,2-dichloro-1,1,1-trifluoroethane[O]	2	0	.	.	.	.	0	0
2-chloro-1,1,1,2-tetrafluoroethane[O]	2	0	.	.	.	.	0	0
Boron Trifluoride	2	0	929	.	.	.	929	465
Mercury Compounds[M]	1	0	.	.	.	.	0	0
Aniline	1	0	.	.	.	.	0	0
Chloroethane	1	0	.	.	.	.	0	0
Vinyl Chloride[C]	1	0	.	.	.	.	0	0
Dichlorofluoromethane	1	0	31,000	.	5,860	.	36,860	36,860
Propylene Oxide[C]	1	0	.	.	.	.	0	0
Tert-butyl Alcohol	1	0	.	.	0	.	0	0
1-chloro-1,1-difluoroethane[O]	1	0	.	.	.	.	0	0
Chloropicrin	1	0	36	.	34,014	.	34,050	34,050
Freon 113[O]	1	0	.	.	11,000	.	11,000	11,000
Dimethyl Sulfate[C]	1	0	.	.	3	.	3	3
Isobutyraldehyde	1	0	.	.	.	.	0	0
Trichloroethylene[C]	1	0	.	.	.	.	0	0
Acrylamide[C]	1	0	.	.	.	.	0	0
Peracetic Acid	1	0	.	.	10,300	.	10,300	10,300
Phthalic Anhydride	1	0	.	.	.	.	0	0
Biphenyl	1	0	.	.	.	.	0	0
Cumene	1	0	.	.	3,074	.	3,074	3,074
Styrene[C]	1	0	.	.	.	.	0	0
Acrylonitrile[C]	1	0	.	.	.	.	0	0
Vinyl Acetate[C]	1	0	.	.	.	.	0	0
Chlorobenzene	1	0	.	.	.	.	0	0
Cyclohexane	1	0	.	.	.	.	0	0
Catechol	1	13	.	.	13	.	26	26
1,2,4-trichlorobenzene	1	0	.	.	.	.	0	0
Triethylamine	1	4,256	.	.	34,656	.	38,912	38,912
1,4-Dioxane[C]	1	0	.	.	0	.	0	0
Dimethylamine	1	0	.	.	.	.	0	0
Sodium Dimethyldithiocarbamate	1	0	.	.	.	.	0	0
Dimethyl Phthalate	1	0	.	.	.	.	0	0
Captan	1	0	.	.	.	.	0	0
1-chloro-1,1,2,2-tetrafluoroethane[O]	1	0	.	.	.	.	0	0
Thorium Dioxide	1	2,600	.	.	.	.	2,600	2,600
Cresol (Mixed Isomers)	1	0	.	.	.	.	0	0
Silver[M]	1	0	.	3,523	.	.	3,523	3,523
Antimony[M]	1	0	.	.	.	.	0	0
Arsenic[C, M]	1	0	.	.	104	.	104	104
Beryllium[C, M]	1	0	.	.	.	.	0	0
Selenium[M]	1	0	.	.	1,200	.	1,200	1,200
Phosphine	1	0	.	.	.	.	0	0
Boron Trichloride	1	0	.	.	.	.	0	0
Sodium Azide	1	0	.	.	.	.	0	0
	413**	4,600,555	6,278,726	4,930,736	5,420,641	386,361	21,724,414	52,601

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Inorganic Chemicals Facilities Reporting Only SIC 281*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	American Chrome & Chemicals, Corpus Christi, Texas	9,494,650
2	Occidental Chemical Corp., Castle Hayne, North Carolina	7,305,995
3	Kaiser Aluminum & Chemical, Mulberry, Florida	6,594,743
4	Chemetals Inc., New Johnsonville, Tennessee	4,806,414
5	SCM Chemicals Americas, Ashtabula, Ohio	2,932,564
6	SCM Chemicals, Baltimore, Maryland	2,690,044
7	Cabot Corp., Tuscola, Illinois	2,472,742
8	Louisiana Pigment Co. L.P., Westlake, Louisiana	2,217,049
9	Mountain Pass Operation, Mountain Pass, California	2,082,112
10	Kerr-McGee Chemical Corp., Henderson, Nevada	1,979,601

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 281 or SIC 281 and Other SIC Codes*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	Courtaulds Fibers Inc., Axis, Alabama	2819, 2823	34,018,200
2	Cytec Ind. Inc., Westwego, Louisiana	2819, 2869	27,034,568
3	Arcadian Fertilizer L.P., Geismar, Louisiana	2819, 2873, 2874	16,780,139
4	Sterling Chemicals Inc., Texas City, Texas	2819, 2865, 2869	15,720,998
5	IMC-Agrico Co., St. James, Louisiana	2819, 2873, 2874	11,712,893
6	American Chrome & Chemicals, Corpus Christi, Texas	2816, 2819	9,494,650
7	Coastal Chem Inc., Cheyenne, Wyoming	2813, 2819, 2869, 2873, 2899	9,283,450
8	Bayer Corp., New Martinsville, West Virginia	2800, 2816, 2869	8,593,758
9	Monsanto, Alvin, Texas	2819, 2841, 2869, 2879	8,390,911
10	Vicksburg Chemical Co., Vicksburg, Mississippi	2819, 2873, 2812	7,341,133

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Inorganic Chemicals Facilities (SIC 281) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	2,132	6%	64%	0%	26%	0%	0%	1%	9%
1995	1,772	5%	77%	0%	18%	0%	0%	1%	4%
1996	1,864	---	78%	0%	18%	0%	0%	1%	4%
1997	2,008	---	79%	0%	17%	0%	0%	0%	3%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Inorganic Chemicals Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	9	5	8	68	0	0	0%	0%	--
II	31	23	268	7	9	23	100%	0%	0.09
III	54	42	660	5	9	21	76%	24%	0.03
IV	89	61	783	7	22	73	90%	10%	0.09
V	87	54	618	8	10	17	59%	41%	0.03
VI	65	38	359	11	16	57	39%	61%	0.16
VII	17	11	66	15	2	3	33%	67%	0.05
VIII	15	9	64	14	6	12	92%	8%	0.19
IX	59	32	195	18	12	25	96%	4%	0.13
X	15	11	66	14	3	4	50%	50%	0.06
TOTAL	441	286	3,087	9	89	235	74%	26%	0.08

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Plastic Resin and Man-made Fiber

1995 TRI Releases for Man-made Fiber Manufacturing Facilities (SIC 2823 & 2824) By Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Ethylene Glycol	13	479,311	558,748	218,523	3,500	1,655	1,261,737	97,057
Biphenyl	12	246,298	52,811	298	5,500	277	305,184	25,432
Ammonia	11	78,827	107,090	284,152	230,695	26,095	726,859	66,078
Chlorine	10	511	62,250	110	0	0	62,871	6,287
Antimony Compounds[M]	9	940	2,303	688	6	18,005	21,942	2,438
Methanol	9	665,183	1,592,326	5,198	370,250	0	2,632,957	292,551
Acetaldehyde[C]	9	400,610	799,922	3,990	120,000	0	1,324,522	147,169
Phosphoric Acid	9	5	6	0	0	0	11	1
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	8	240	6,034,881	0	0	0	6,035,121	754,390
1,4-Dioxane[C]	7	13,339	48,658	125,342	0	10	187,349	26,764
Nitrate Compounds	6	0	0	856,584	11,000,000	0	11,856,584	1,976,097
Zinc Compounds[M]	6	250	2,653	63,900	2	533,600	600,405	100,068
Toluene	6	310,790	616,243	266	0	0	927,299	154,550
Sulfuric Acid	6	0	2,907	0	0	0	2,907	485
Manganese Compounds[M]	5	0	2,500	2,000	340	19,000	23,840	4,768
Formaldehyde[C]	5	3,914	40,678	12,724	28,000	0	85,316	17,063
Methyl Ethyl Ketone	5	96,416	87,991	424	88,000	0	272,831	54,566
Nitric Acid	5	2,400	4,900	0	200,000	0	207,300	41,460
Chromium Compounds[C, M]	4	0	533	1,510	0	8,400	10,443	2,611
Carbon Disulfide	4	2,697,000	56,760,000	39,110	0	265	59,496,375	14,874,094
Formic Acid	3	1,602	17,908	52	3,400,000	0	3,419,562	1,139,854
N-butyl Alcohol	3	35,011	3,838	18,000	830,000	0	886,849	295,616
Trichlorofluoromethane[O]	3	219,927	4,400	75	0	0	224,402	74,801
Acrylonitrile[C]	3	36,836	222,786	0	8,760	0	268,382	89,461
Vinyl Acetate[C]	3	9,909	125,510	1	750	0	136,170	45,390
Hydroquinone	3	12,000	1,039	3,400	0	0	16,439	5,480
Butyraldehyde	3	17,330	53,300	110	84,000	0	154,740	51,580
Dimethylamine	3	18,312	261,417	20,500	0	0	300,229	100,076
Nickel[C, M]	3	0	110	341	6,100	1,340	7,891	2,630
Copper Compounds[M]	2	0	270	690	170	6,100	7,230	3,615
Diisocyanates	2	142	0	0	0	0	142	71
Certain Glycol Ethers	2	98,400	7,100	408	0	0	105,908	52,954
Benzene[C]	2	0	8,100	0	0	0	8,100	4,050
1,1,1-Trichloroethane[O]	2	6,394	227,694	0	0	0	234,088	117,044
Ethylene	2	3,400	110,000	0	0	0	113,400	56,700
Acetonitrile	2	39,536	44,719	497	0	0	84,752	42,376
Dichloromethane[C]	2	125,694	291,436	0	0	0	417,130	208,565
Ethylene Oxide[C]	2	250	23,005	0	0	0	23,255	11,628
Tert-butyl Alcohol	2	0	65	0	750	0	815	408
Dichlorodifluoromethane[O]	2	23,581	0	0	0	0	23,581	11,791
Styrene[C]	2	1,500	2,100	190	0	0	3,790	1,895
1,3-butadiene[C]	2	380	18,400	0	0	0	18,780	9,390
Phenol	2	191	1,171	626	0	0	1,988	994
2-methoxyethanol	2	24	63	2,800	0	0	2,887	1,444
N-hexane	2	188,179	4,672	0	0	0	192,851	96,426
Cyclohexane	2	10,900	150,980	9	20,000	0	181,889	90,945
Diethanolamine	2	270	1,483	0	0	0	1,753	877
Propionaldehyde	2	14,000	100,000	7	80,000	0	194,007	97,004
Dimethyl Phthalate	2	6	275	230	750	0	1,261	631
Butyl Acrylate	2	36	513	5	0	0	554	277
Sodium Nitrite	2	0	0	0	6,500	0	6,500	3,250
Toluene Diisocyanate[C] (Mixed Isomers)	2	10	5	0	0	0	15	8
Cadmium Compounds[C, M]	1	0	0	0	0	0	0	0
Cobalt Compounds[C, M]	1	0	280	0	0	14,000	14,280	14,280
Cyanide Compounds	1	0	0	0	0	0	0	0
Lead Compounds[C, M]	1	0	13	0	0	0	13	13
Nickel Compounds[C, M]	1	0	1	0	0	0	1	1
2,4-Dinitrophenol	1	110	0	2,000	0	0	2,110	2,110
Aniline	1	40	120	4,300	0	0	4,460	4,460
Diethyl Sulfate[C]	1	230	0	0	0	0	230	230
Chloroform[C]	1	7,000	17,000	72	0	0	24,072	24,072
n,n-dimethylformamide[C]	1	460	4,100	410	0	0	4,970	4,970
Bromomethane[O]	1	720	210,000	11	0	0	210,731	210,731
Methyl Iodide	1	4,000	16	0	0	0	4,016	4,016

1995 TRI Releases for Man-made Fiber Manufacturing Facilities (SIC 2823 & 2824) By Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Hydrogen Cyanide	1	27,200	44,410	0	0	0	71,610	71,610
Vinylidene Chloride	1	190	5,900	0	0	0	6,090	6,090
Chlorodifluoromethane[O]	1	5,790	0	0	0	0	5,790	5,790
Freon 113[O]	1	167,230	30,375	0	0	0	197,605	197,605
Dichlorotetrafluoroethane (CFC-114)[O]	1	8,244	0	0	0	0	8,244	8,244
Dimethyl Sulfate[C]	1	0	0	0	0	0	0	0
Isobutyraldehyde	1	20,000	7,300	0	0	0	27,300	27,300
Sec-butyl Alcohol	1	0	0	0	48,000	0	48,000	48,000
Acrylic Acid	1	3	1,087	20	0	0	1,110	1,110
1,1,2,2-tetrachloroethane	1	160	250	0	0	0	410	410
4,4'-isopropylidenediphenol	1	0	0	0	0	0	0	0
Methyl Methacrylate	1	750	750	0	0	0	1,500	1,500
Dibutyl Phthalate	1	7,000	190	85	0	0	7,275	7,275
Phthalic Anhydride	1	3,900	1,100	0	0	0	5,000	5,000
Picric Acid	1	0	0	0	25,000	0	25,000	25,000
O-anisidine[C]	1	460	10	0	0	0	470	470
2-phenylphenol	1	0	59	0	0	0	59	59
O-xylene	1	17,000	35,000	2	0	0	52,002	52,002
O-Toluidine[C]	1	460	0	0	0	0	460	460
Methyl Acrylate	1	3	817	0	0	0	820	820
Dichloran	1	0	0	0	0	0	0	0
p-nitroaniline	1	3	0	2	0	0	5	5
Benzyl Chloride	1	0	0	0	0	0	0	0
p-xylene	1	6,400	63,000	0	0	0	69,400	69,400
p-phenylenediamine	1	0	0	.	0	0	0	0
Quinone	1	3,800	3,300	1,500	0	0	8,600	8,600
Methyl Isobutyl Ketone	1	44,000	100,000	4,000	0	0	148,000	148,000
Maleic Anhydride	1	0	0	0	0	0	0	0
M-xylene	1	1,000	1,000	0	0	0	2,000	2,000
1,3-phenylenediamine	1	0	0	.	0	0	0	0
Chlorobenzene	1	290	1,500	1	0	0	1,791	1,791
Cyclohexanol	1	92	3,600	0	1,300,000	0	1,303,692	1,303,692
Pyridine	1	41	2	190	0	0	233	233
Propylene	1	540	14,000	0	0	0	14,540	14,540
Di(2-ethylhexyl) Phthalate[C]	1	8,300	2	230	0	0	8,532	8,532
Triethylamine	1	280	12,000	13	0	0	12,293	12,293
n,n-dimethylaniline	1	0	0	0	0	0	0	0
Tetrachloroethylene[C]	1	420	3,280	.	0	0	3,700	3,700
Ethyl Acrylate[C]	1	2	844	0	0	0	846	846
p-nitrosodiphenylamine	1	24	0	0	0	0	24	24
Bis(chloromethyl) Ether[C]	1	0	0	0	0	0	0	0
Vinyl Bromide[C]	1	220	8,000	0	0	0	8,220	8,220
N-methyl-2-pyrrolidone	1	84	1	8,000	0	0	8,085	8,085
Decabromodiphenyl Oxide	1	0	1	0	11	0	12	12
Xylene (Mixed Isomers)	1	30,000	33,000	270	0	0	63,270	63,270
Crotonaldehyde	1	35,000	55,000	680	0	0	90,680	90,680
Antimony[M]	1	0	5	250	0	250	505	505
Cadmium[C, M]	1	0	0	71	0	71	142	142
Copper[M]	1	0	0	620	29,000	0	29,620	29,620
Boron Trifluoride	1	0	0	0	0	0	0	0
Hydrogen Fluoride	1	0	340,000	0	0	0	340,000	340,000
Chlorine Dioxide	1	0	0	0	0	0	0	0
	34**	6,261,300	69,457,072	1,685,487	17,886,084	629,068	95,919,011	2,821,147

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Man-made Fiber Manufacturing Facilities (SIC 2823 & 2824) By Number of Facilities Reporting (Pounds/year)*

Chemical Name	# Reporting Chemical	POTW Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Ethylene Glycol	13	81,958	333,823	40,865,058	67,979	1,186,722	42,535,540	3,271,965
Biphenyl	12	0	19,777	46,500	5,197	5,400	76,874	6,406
Ammonia	11	752	.	.	.	.	752	68
Chlorine	10	0	.	.	.	.	0	0
Antimony Compounds[M]	9	194	6,843	12,799	10,922	.	30,758	3,418
Methanol	9	15,565	580	1,180,100	12,273	241,958	1,450,476	161,164
Acetaldehyde[C]	9	0	250	27,000	8,920	500	36,670	4,074
Phosphoric Acid	9	1,600	.	.	.	.	1,600	178
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	8	0	.	.	.	.	0	0
1,4-Dioxane[C]	7	140	13,557	.	1,190	1,182	16,069	2,296
Nitrate Compounds	6	0	.	.	467	.	467	78
Zinc Compounds[M]	6	901	868,900	.	.	.	869,801	144,967
Toluene	6	923	3,619	1,000	12,065	58,369	75,976	12,663
Sulfuric Acid	6	0	.	.	.	.	0	0
Manganese Compounds[M]	5	305	501	.	2	.	808	162
Formaldehyde[C]	5	2,060	.	.	37	.	2,097	419
Methyl Ethyl Ketone	5	0	.	.	700	79,951	80,651	16,130
Nitric Acid	5	0	.	.	.	.	0	0
Chromium Compounds[C, M]	4	0	5	24,000	.	.	24,005	6,001
Carbon Disulfide	4	0	.	.	2,900	.	2,900	725
Formic Acid	3	0	.	.	208	.	208	69
N-butyl Alcohol	3	0	.	.	181	58	239	80
Trichlorofluoromethane[O]	3	0	.	3,850	.	.	3,850	1,283
Acrylonitrile[C]	3	200	120	.	250	.	570	190
Vinyl Acetate[C]	3	0	.	.	557	1,290	1,847	616
Hydroquinone	3	150	43	.	.	.	193	64
Butyraldehyde	3	0	.	.	.	.	0	0
Dimethylamine	3	0	.	.	.	.	0	0
Nickel[C, M]	3	0	13	185,000	.	.	185,013	61,671
Copper Compounds[M]	2	0	1,686	30,000	.	.	31,686	15,843
Diisocyanates	2	0	.	.	17,258	.	17,258	8,629
Certain Glycol Ethers	2	430	.	43,000	240	.	43,670	21,835
Benzene[C]	2	0	.	.	.	.	0	0
1,1,1-Trichloroethane[O]	2	0	.	17,443	320	.	17,763	8,882
Ethylene	2	0	.	.	.	.	0	0
Acetonitrile	2	0	.	.	350,340	.	350,340	175,170
Dichloromethane[C]	2	0	.	47,125	2,999	.	50,124	25,062
Ethylene Oxide[C]	2	0	.	.	.	.	0	0
Tert-butyl Alcohol	2	0	.	.	.	.	0	0
Dichlorodifluoromethane[O]	2	0	.	.	.	.	0	0
Styrene[C]	2	0	.	.	.	.	0	0
1,3-butadiene[C]	2	0	.	.	.	.	0	0
Phenol	2	0	2,881	.	1	.	2,882	1,441
2-methoxyethanol	2	0	.	.	.	.	0	0
N-hexane	2	0	.	.	508	.	508	254
Cyclohexane	2	0	.	.	.	.	0	0
Diethanolamine	2	0	.	.	.	.	0	0
Propionaldehyde	2	0	.	.	.	.	0	0
Dimethyl Phthalate	2	0	.	.	.	.	0	0
Butyl Acrylate	2	0	15	.	337	.	352	176
Sodium Nitrite	2	0	.	.	.	.	0	0
Toluene Diisocyanate (Mixed	2	0	.	.	.	450	450	225
Cadmium Compounds[C, M]	1	0	9,000	.	.	.	9,000	9,000
Cobalt Compounds[C, M]	1	0	4,000	9,500	.	.	13,500	13,500
Cyanide Compounds	1	0	.	.	.	.	0	0
Lead Compounds[C, M]	1	0	0	.	.	.	0	0
Nickel Compounds[C, M]	1	0	0	.	.	.	0	0
2,4-Dinitrophenol	1	0	.	.	.	.	0	0
Aniline	1	0	.	.	.	.	0	0
Diethyl Sulfate[C]	1	0	.	.	.	.	0	0
Chloroform[C]	1	0	.	.	.	.	0	0
n,n-dimethylformamide[C]	1	0	.	.	1,300	.	1,300	1,300
Bromomethane[O]	1	0	.	.	.	.	0	0
Methyl Iodide	1	0	.	.	.	.	0	0

1995 TRI Transfers for Man-made Fiber Manufacturing Facilities (SIC 2823 & 2824) By Number of Facilities Reporting (Pounds/year)*

Chemical Name	# Reporting Chemical	POTW Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Hydrogen Cyanide	1	0	.	.	.	.	0	0
Vinylidene Chloride	1	0	.	.	.	.	0	0
Chlorodifluoromethane[O]	1	0	.	.	.	.	0	0
Freon 113[O]	1	250	.	.	500	.	750	750
Dichlorotetrafluoroethane (CFC-114)[O]	1	0	.	.	.	.	0	0
Dimethyl Sulfate[C]	1	0	.	.	.	.	0	0
Isobutyraldehyde	1	0	.	.	.	.	0	0
Sec-butyl Alcohol	1	0	.	.	.	.	0	0
Acrylic Acid	1	0	.	.	287	.	287	287
1,1,2,2-tetrachloroethane	1	0	.	.	.	.	0	0
4,4'-isopropylidenediphenol	1	0	.	.	.	.	0	0
Methyl Methacrylate	1	0	.	.	.	.	0	0
Dibutyl Phthalate	1	0	.	.	.	.	0	0
Phthalic Anhydride	1	0	.	.	1,000	.	1,000	1,000
Picric Acid	1	0	.	.	.	.	0	0
O-anisidine[C]	1	0	.	.	.	.	0	0
2-phenylphenol	1	0	.	.	.	.	0	0
O-xylene	1	0	.	.	.	.	0	0
O-Toluidine[C]	1	0	.	.	.	.	0	0
Methyl Acrylate	1	0	.	.	78	.	78	78
Dichloran	1	0	.	.	.	.	0	0
p-nitroaniline	1	0	.	.	.	.	0	0
Benzyl Chloride	1	0	.	.	.	.	0	0
P-xylene	1	0	.	.	.	.	0	0
P-phenylenediamine	1	0	.	.	3,200	.	3,200	3,200
Quinone	1	0	.	.	.	.	0	0
Methyl Isobutyl Ketone	1	0	.	.	.	.	0	0
Maleic Anhydride	1	0	.	.	.	.	0	0
M-xylene	1	0	.	.	.	.	0	0
1,3-phenylenediamine	1	0	.	.	104,000	.	104,000	104,000
Chlorobenzene	1	0	.	.	.	.	0	0
Cyclohexanol	1	0	.	.	.	.	0	0
Pyridine	1	0	.	.	.	.	0	0
Propylene	1	0	.	.	.	.	0	0
Di(2-ethylhexyl) Phthalate[C]	1	0	.	.	8,500	.	8,500	8,500
Triethylamine	1	0	.	.	600	.	600	600
N,N-dimethylaniline	1	0	.	.	.	.	0	0
Tetrachloroethylene[C]	1	0	.	.	2,400	.	2,400	2,400
Ethyl Acrylate[C]	1	0	.	.	354	.	354	354
p-nitrosodiphenylamine	1	0	.	.	.	15,000	15,000	15,000
Bis(chloromethyl) Ether[C]	1	0	.	.	.	.	0	0
Vinyl Bromide[C]	1	0	.	.	.	.	0	0
N-methyl-2-pyrrolidone	1	0	.	.	398,000	.	398,000	398,000
Decabromodiphenyl Oxide	1	0	3,700	.	.	.	3,700	3,700
Xylene (Mixed Isomers)	1	0	370	.	800,029	13,000	813,399	813,399
Crotonaldehyde	1	0	.	.	.	.	0	0
Antimony[M]	1	0	500	.	12,150	.	12,650	12,650
Cadmium[C, M]	1	0	8,400	11,000	.	.	19,400	19,400
Copper[M]	1	0	.	.	.	.	0	0
Boron Trifluoride	1	0	.	.	.	.	0	0
Hydrogen Fluoride	1	0	.	.	.	.	0	0
Chlorine Dioxide	1	0	.	.	.	.	0	0
	34**	105,428	1,278,583	42,503,375	1,828,249	1,603,880	47,319,515	1,391,750

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Plastic Resin Manufacturing Facilities Reporting Only SIC 2821*		
Rank	**Facility[1]**	**Total Releases in Pounds**
1	BP Chemicals Inc. - Lima, OH	13,566,795
2	GE Plastics Co. - Mount Vernon, IN	3,446,425
3	Rexene Corp. - Odessa, TX	2,558,214
4	Quantum Chemical Corp. - Clinton, IA	2,508,685
5	Du Pont - Washington, WV	2,281,027
6	Quantum Chemical Corp. - La Porte, TX	2,225,186
7	GE Co. - Waterford, NY	2,219,600
8	Shell Chemical Co. - Apple Grove, WV	1,529,579
9	Carolina Eastman Div. - Columbia, SC	1,487,312
10	Exxon Chemical Co. - Baton Rouge, LA	1,088,290

Source: USEPA 1995 Toxics Release Inventory Database.
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 2821 (Plastic Resin Manufacturing) or SIC 2821 and Other SIC Codes*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total Releases in Pounds**
1	Monsanto Co. - Cantonment, FL	2821, 2824, 2824, 2869, 2865	18,058,737
2	BP Chemicals Inc. - Lima, OH	2821, 2869	13,566,795
3	Tennessee Eastman Div. - Kingsport, TN	2821, 2823, 2869, 2865, 2893	7,341,378
4	Dow Chemical Co. - Freeport, TX	2821, 2812, 2813, 2819, 2822, 2865	5,593,977
5	Shell Oil Co. - Deer Park, TX	2821, 2911, 2869, 2865	4,513,517
6	Eastman Chemical Co. - Longview, TX	2821, 2869	3,908,702
7	Du Pont - Leland, NC	2821, 2865, 2824	3,653,612
8	GE Plastics Co. - Mount Vernon, IN	2821	3,446,425
9	Union Camp Corp. - Savannah, GA	2821, 2611, 2631 2653	3,121,612
10	ELF Atochem N.A. Inc. - Calvert City, KY	2821, 2869, 2819	3,082,676

Source: USEPA 1995 Toxics Release Inventory Database.
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Ten Largest Volume TRI Releasing Man-made Fiber Manufacturing Facilities Reporting Only SIC 2823 and 2824*		
Rank	**Facility[1]**	**Total Releases in Pounds**
1	Lenzing Fibers Corp. - Lowland, TN	23,231,860
2	North American Rayon Corp. - Elizabethton, TN	2,960,770
3	Hoechst Celanese Corp. - Salisbury, NC	303,935
4	Globe Manufacturing Co. - Gastonia, NC	272,036
5	Allied Signal Inc. - Chesterfield, VA	197,605
6	Cytec Industries Inc. - Milton, FL	125,116
7	Allied Signal Inc. - Hopewell, VA	44,400
8	Hispan Corporation - Decatur, AL	4,668
9	Globe Elastic Co. Inc. - Tuscaloosa, AL	112
10	Polyloom Corp. of America - Dayton, TN	17

Source: U.S. EPA, Toxics Release Inventory Database, 1995.
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 2823 and 2824 (Man-made Fiber Manufacturing) or SIC 2823 and 2824 and Other SIC Codes*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total Releases in Pounds**
1	Courtaulds Fibers Inc. - Axis, AL	2823, 2819	34,018,200
2	Lenzing Fibers Corp. - Lowland, TN	2823	23,231,860
3	Monsanto Co. - Cantonment, FL	2824, 2869, 2821, 2865	18,058,737
4	Tennessee Eastman Div. - Kingsport, TN	2823, 2821, 2869, 2865, 2893	7,481,378
5	Du Pont - Leland, NC	2824, 2865, 2821	3,653,612
6	North American Rayon Corp. - Elizabethton, TN	2823	2,960,770
7	Du Pont - Washington, WV	2824, 2821, 2869	2,281,027
8	Monsanto Co. - Decatur, AL	2824, 2869	1,580,530
9	Du Pont - Camden, SC	2824, 2821	1,105,503
10	Du Pont - Seaford, DE	2824, 2821	774,488

Source: U.S. EPA, Toxics Release Inventory Database, 1995.
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for the Plastic Resin Industry (SIC 2821) as Reported Within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed Off-Site[c]
1994	4,116	5%	24%	12%	43%	2%	7%	4%	9%
1995	1,363	19%	39%	12%	31%	6%	4%	3%	5%
1996	1,448	---	36%	16%	28%	7%	4%	2%	7%
1997	1,432	---	37%	15%	28%	7%	4%	2%	7%

Source: *U.S. EPA, Toxic Release Inventory Database, 1995.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Source Reduction and Recycling Activity for the Man-made Fiber Industry (SIC 2823, 2824) as Reported Within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed Off-Site[c]
1994	634	21%	23%	1%	56%	8%	1%	0%	13%
1995	689	21%	31%	1%	48%	6%	0%	0%	14%
1996	814	---	44%	1%	40%	5%	0%	0%	11%
1997	908	---	50%	1%	36%	4%	0%	0%	9%

Source: *U.S. EPA, Toxic Release Inventory Database, 1995.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Plastic Resin and Man-made Fiber Industry*

A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	24	16	73	20	4	8	50%	50%	0.11
II	31	30	366	5	17	52	81%	19%	0.14
III	38	36	418	5	10	21	90%	10%	0.05
IV	90	78	864	6	22	46	78%	22%	0.05
V	55	40	311	11	5	9	67%	33%	0.03
VI	51	43	309	10	28	76	71%	29%	0.25
VII	6	5	20	18	1	1	0%	100%	0.05
VIII	4	1	11	22	1	1	100%	0%	0.09
IX	25	10	41	37	4	3	100%	0%	0.07
X	5	4	17	18	1	2	100%	0%	0.12
TOTAL	329	263	2,430	8	93	219	76%	24%	0.09

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Pharmaceuticals

1995 TRI Releases for Pharmaceutical Facilities (SIC 2833 and 2834) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Methanol	104	1,396,868	2,100,445	841,250	5,820,000	1,370	10,159,933	97,692
Dichloromethane[C]	63	2,386,889	4,611,794	21,635	83,000	5	7,103,323	112,751
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	62	68,269	532,143	10	0	5	600,427	9,684
Toluene	54	498,932	593,839	10,025	9,100	0	1,111,896	20,591
Ammonia	42	772,824	380,822	1,665,336	0	232,413	3,051,395	72,652
Phosphoric Acid	31	5,194	5,160	20	0	5	10,379	335
Ethylene Glycol	30	21,721	2,638	20,200	0	500	45,059	1,502
Acetonitrile	25	206,608	106,670	1,405	219,000	5	533,688	21,348
N,N-dimethylformamide[C]	20	63,972	10,598	69,005	1,000,000	1,700	1,145,275	57,264
Chlorine	19	4,315	9,036	16,633	0	5	29,989	1,578
N-hexane	18	201,267	258,124	2,384	5,300	5	467,080	25,949
Triethylamine	17	22,262	15,957	10,030	5,900	5	54,154	3,186
Zinc Compounds[M]	16	765	11,169	73,686	100,000	121,500	307,120	19,195
Chloroform[C]	14	55,536	88,826	3,105	0	0	147,467	10,533
N-butyl Alcohol	14	145,024	476,734	255	6,600	0	628,613	44,901
Methyl Isobutyl Ketone	14	273,952	109,175	15,000	6,500	0	404,627	28,902
Xylene (Mixed Isomers)	14	10,712	107,105	0	0	0	117,817	8,416
Formic Acid	13	21,550	3,173	5,160	1,400	5	31,288	2,407
Nitric Acid	13	8,029	12,928	10	0	0	20,967	1,613
Methyl Tert-butyl Ether	11	4,061	18,449	0	12,000	0	34,510	3,137
Sulfuric Acid	11	22,283	3,091	0	0	0	25,374	2,307
Nitrate Compounds	10	0	0	2,082,243	0	16,875	2,099,118	209,912
Formaldehyde[C]	9	2,662	3,772	2,000	0	0	8,434	937
Cyclohexane	9	47,574	147,052	700	33,000	0	228,326	25,370
Dichlorodifluoromethane[O]	8	22,610	195,178	0	0	0	217,788	27,224
Certain Glycol Ethers	7	1,310	27,944	5	0	0	29,259	4,180
Tert-butyl Alcohol	7	26,713	19,473	2,400	36,000	0	84,586	12,084
Methyl Ethyl Ketone	7	20,624	51,120	50	31,000	0	102,794	14,685
Naphthalene	7	515	1,014	0	0	0	1,529	218
Pyridine	7	2,820	3,093	5	13,000	0	18,918	2,703
Copper Compounds[M]	6	6	67	0	0	0	73	12
Cyanide Compounds	6	425	868	5,810	2,800	0	9,903	1,651
Manganese Compounds[M]	6	260	1,005	26,905	0	505	28,675	4,779
Chloromethane	6	28,840	97,844	44,000	0	0	170,684	28,447
Trichlorofluoromethane[O]	6	59,306	61,801	0	0	0	121,107	20,185
Di(2-ethylhexyl) Phthalate[C]	6	255	292	0	0	0	547	91
Ethylbenzene	5	789	977	0	0	0	1,766	353
1,2-Dichloroethane[C]	5	928	1,313	269	10,000	0	12,510	2,502
2-methoxyethanol	5	9,130	9,455	0	0	0	18,585	3,717
Bromine	5	780	389	10	0	5	1,184	237
Arsenic Compounds[C, M]	4	5	10	0	0	0	15	4
Nickel Compounds[C, M]	4	0	75	434	0	96	605	151
Chlorodifluoromethane[O]	4	31,484	30,009	0	0	0	61,493	15,373
Chloroacetic Acid	4	24	5	16	0	0	45	11
Benzoyl Peroxide	4	0	0	0	0	0	0	0
Sodium Nitrite	4	0	0	15,000	0	0	15,000	3,750
Barium Compounds[M]	3	10	5	250	0	0	265	88
Aniline	3	3,896	1,173	0	0	0	5,069	1,690
Benzene[C]	3	2,970	582	0	760	0	4,312	1,437
Ethylene Oxide[C]	3	12,143	9,550	0	0	0	21,693	7,231
Dichlorotetrafluoroethane	3	4,978	2,260	0	0	0	7,238	2,413
Peracetic Acid	3	255	5	5	0	5	270	90
Hydrazine[C]	3	285	50	3	0	0	338	113
Ozone	3	250	522	0	0	0	772	257
Tetracycline Hydrochloride	2	0	754	0	0	0	754	377
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	2	61,250	140,250	0	0	0	201,500	100,750
Methyl Iodide	2	1,100	850	0	0	0	1,950	975
Propylene Oxide[C]	2	500	1,330	5	0	0	1,835	918
Freon 113[O]	2	3,500	38,119	0	0	0	41,619	20,810
Acrylic Acid	2	33	22	0	0	0	55	28
Phthalic Anhydride	2	1	0	0	0	0	1	1
Benzoyl Chloride	2	0	2	0	0	0	2	1
Benzyl Chloride	2	5	5	0	0	0	10	5
Epichlorohydrin[C]	2	290	50	0	0	0	340	170

1995 TRI Releases for Pharmaceutical Facilities (SIC 2833 and 2834) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
M-xylene	2	1,565	571	250	0	0	2,386	1,193
Phenol	2	255	255	0	0	0	510	255
Diethanolamine	2	500	1,000	5	0	0	1,505	753
1,4-Dioxane[C]	2	270	260	0	0	0	530	265
Dimethylamine	2	23,500	15,250	250	0	250	39,250	19,625
Tetrachloroethylene[C]	2	2,239	14,000	0	0	0	16,239	8,120
Diazinon	2	5	278	5	0	0	288	144
Zinc (Fume or Dust)[M]	2	0	2	0	0	0	2	1
Titanium Tetrachloride	2	5	10	0	0	0	15	8
Hydrogen Fluoride	2	250	8,350	0	0	0	8,600	4,300
Abamectin	2	0	0	16	0	0	16	8
Antimony Compounds[M]	1	5	5	0	0	0	10	10
Chromium Compounds[C, M]	1	0	0	0	43,000	0	43,000	43,000
Cobalt Compounds[C, M]	1	0	0	0	0	0	0	0
Selenium Compounds[M]	1	0	3	0	0	0	3	3
Famphur	1	0	0	0	0	0	0	0
Carbon Tetrachloride[C, O]	1	60	400	67	0	0	527	527
Phenytoin[C]	1	0	0	0	0	0	0	0
Dichlorvos[C]	1	5	250	5	0	0	260	260
1,1,1-Trichloroethane[O]	1	76,500	52,500	0	0	0	129,000	129,000
Bromomethane[O]	1	50	21	0	0	0	71	71
Chloroethane	1	163	0	0	0	0	163	163
Carbon Disulfide	1	2,450	21,000	0	0	0	23,450	23,450
Phosgene	1	240	5	0	5	0	250	250
Dimethyl Sulfate[C]	1	0	8	0	0	0	8	8
Isobutyraldehyde	1	11	25	0	0	0	36	36
Sec-butyl Alcohol	1	250	71,799	0	0	0	72,049	72,049
Methyl Chlorocarbonate	1	250	0	5	0	5	260	260
Quinoline	1	5	0	5	0	5	15	15
Biphenyl	1	5	0	0	0	0	5	5
O-xylene	1	2,400	54	0	0	0	2,454	2,454
1,2-Dichlorobenzene	1	244	2,490	0	0	0	2,734	2,734
1,2,4-trimethylbenzene	1	250	250	5	0	0	505	505
Cumene	1	250	250	5	0	0	505	505
Acetophenone	1	5	5	0	0	0	10	10
Nitrobenzene	1	3,891	321	0	0	0	4,212	4,212
Allyl Chloride	1	321	27	0	0	0	348	348
Chloromethyl Methyl Ether[C]	1	0	0	0	0	0	0	0
Maleic Anhydride	1	5	5	0	5	0	15	15
Chlorobenzene	1	12	11	0	0	0	23	23
Cyclohexanol	1	93	133	0	0	0	226	226
2-ethoxyethanol	1	29	91	0	0	0	120	120
Propylene	1	5	5	0	0	0	10	10
N,N-dimethylaniline	1	5	35	0	0	0	40	40
Malathion	1	0	2	0	0	0	2	2
Thiabendazole	1	175	3,504	0	0	0	3,679	3,679
Ethyl Chloroformate	1	250	250	5	0	5	510	510
1,3-Dichlorobenzene	1	1,200	80	0	0	0	1,280	1,280
Lithium Carbonate	1	0	0	0	0	0	0	0
N-methyl-2-pyrrolidone	1	7	0	0	0	0	7	7
Tetrachlorvinphos	1	5	5	5	0	0	15	15
Trifluralin	1	6,900	250	0	0	0	7,150	7,150
Benfluralin	1	750	250	0	0	0	1,000	1,000
Prometryn	1	0	0	0	0	0	0	0
Nickel[C, M]	1	0	0	250	0	0	250	250
Thiophanate-methyl	1	0	187	0	0	0	187	187
Sodium Azide	1	0	0	0	0	0	0	0
Vinclozolin	1	0	0	0	0	0	0	0
Permethrin	1	0	0	0	0	0	0	0
Propiconazole	1	0	0	0	0	0	0	0
	200**	6,664,939	10,500,358	4,936,137	7,438,370	375,274	29,915,078	149,575

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Pharmaceutical Facilities (SIC 2833 and 2834) by Number and Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	POTW Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Methanol	104	10,078,077	15,765	2,895,743	6,162,576	45,367,761	64,531,571	620,496
Dichloromethane[C]	63	751,775	16,824	5,012,106	7,276,313	1,235,911	14,292,929	226,872
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	62	1,760	0	40	42,681	50	44,531	718
Toluene	54	414,049	1,561	3,339,411	6,122,272	19,740,070	29,617,363	548,470
Ammonia	42	1,071,827	1,465	.	112,847	9,600	1,195,739	28,470
Phosphoric Acid	31	3,105	0	.	57	.	3,162	102
Ethylene Glycol	30	554,598	3,852	336,439	61,127	77,350	1,033,366	34,446
Acetonitrile	25	95,246	1	2,069,030	3,383,572	2,740,790	8,288,639	331,546
N,N-dimethylformamide[C]	20	183,581	139,701	148,797	237,849	1,603,998	2,313,926	115,696
Chlorine	19	5	.	.	.	.	5	0
N-hexane	18	12,278	2,700	240,109	1,441,312	1,138,050	2,834,449	157,469
Triethylamine	17	187,407	12	3,600	198,784	247,722	637,525	37,501
Zinc Compounds[M]	16	9,575	750,130	.	22,330	5,957	787,992	49,250
Chloroform[C]	14	106,977	750	44,703	702,085	30,985	885,500	63,250
N-butyl Alcohol	14	489,700	1	.	107,940	953,422	1,551,063	110,790
Methyl Isobutyl Ketone	14	260,567	0	1,573	230,440	1,016,450	1,509,030	107,788
Xylene (Mixed Isomers)	14	7,961	.	250	9,823	1,572,510	1,590,544	113,610
Formic Acid	13	86,010	.	.	37,750	29	123,789	9,522
Nitric Acid	13	5	.	250,803	339	.	251,147	19,319
Methyl Tert-butyl Ether	11	27,370	0	.	278,900	1,070,683	1,376,953	125,178
Sulfuric Acid	11	0	.	.	.	.	0	0
Nitrate Compounds	10	100,018	.	.	135	.	100,153	10,015
Formaldehyde[C]	9	251,529	3,650	.	190	.	255,369	28,374
Cyclohexane	9	755	600	250	15,100	311,350	328,055	36,451
Dichlorodifluoromethane[O]	8	0	.	95,320	137,292	.	232,612	29,077
Certain Glycol Ethers	7	146,087	.	.	26	312,401	458,514	65,502
Tert-butyl Alcohol	7	6,066	4,950	.	251	425,850	437,117	62,445
Methyl Ethyl Ketone	7	1,190	.	750	5,432	260,702	268,074	38,296
Naphthalene	7	0	0	.	92	435	527	75
Pyridine	7	207,128	5	11,765	2,937	92,177	314,012	44,859
Copper Compounds[M]	6	467	1,410	.	9,300	.	11,427	1,905
Cyanide Compounds	6	285	.	.	104	.	389	65
Manganese Compounds[M]	6	6,650	8,116	.	500	.	15,266	2,544
Chloromethane	6	20	.	.	42	.	62	10
Trichlorofluoromethane[O]	6	0	.	104,310	233,270	167,833	505,413	84,236
Di(2-ethylhexyl) Phthalate[C]	6	281	13,698	2,912,911	.	647	2,927,537	487,923
Ethylbenzene	5	316	.	.	3,266	74,215	77,797	15,559
1,2-Dichloroethane[C]	5	3,124	250	100,597	2,074	36,300	142,345	28,469
2-methoxyethanol	5	976,200	.	.	.	1,524,333	2,500,533	500,107
Bromine	5	2,640,807	259,632	.	.	.	2,900,439	580,088
Arsenic Compounds[C, M]	4	60	7,494	.	3,608	.	11,162	2,791
Nickel Compounds[C, M]	4	0	422	83,180	14	.	83,616	20,904
Chlorodifluoromethane[O]	4	0	.	.	.	.	0	0
Chloroacetic Acid	4	0	.	.	2,628	.	2,628	657
Benzoyl Peroxide	4	1,502	250	.	2,797	1,303	5,852	1,463
Sodium Nitrite	4	124,660	.	.	13,009	.	137,669	34,417
Barium Compounds[M]	3	170	58	.	14	.	242	81
Aniline	3	2,500	11,833	.	24,922	867	40,122	13,374
Benzene[C]	3	523	20	.	96,050	335,350	431,943	143,981
Ethylene Oxide[C]	3	0	.	.	750	.	750	250
Dichlorotetrafluoroethane	3	0	.	1,689	15,787	.	17,476	5,825
Peracetic Acid	3	0	.	.	.	.	0	0
Hydrazine[C]	3	0	.	.	.	.	0	0
Ozone	3	0	.	.	.	.	0	0
Tetracycline Hydrochloride	2	1,256	112	.	500	.	1,868	934
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only, No Supplie	2	1,300	.	.	.	.	1,300	650
Methyl Iodide	2	0	.	.	.	.	0	0
Propylene Oxide[C]	2	20,750	.	.	.	180	20,930	10,465
Freon 113[O]	2	0	.	.	16,000	62	16,062	8,031
Acrylic Acid	2	0	.	.	2,758	.	2,758	1,379
Phthalic Anhydride	2	0	.	.	.	.	0	0
Benzoyl Chloride	2	0	.	.	.	.	0	0
Benzyl Chloride	2	5	.	.	10	.	15	8
Epichlorohydrin[C]	2	0	0	.	.	.	0	0

1995 TRI Transfers for Pharmaceutical Facilities (SIC 2833 and 2834) by Number and Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	POTW Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
M-xylene	2	20	.	.	87,148	78,059	165,227	82,614
Phenol	2	250	.	.	548	.	798	399
Diethanolamine	2	1,500	.	.	.	47,916	49,416	24,708
1,4-Dioxane[C]	2	4,170	2	.	300	8,960	13,432	6,716
Dimethylamine	2	0	38,000	.	2,100	.	40,100	20,050
Tetrachloroethylene[C]	2	0	.	510	.	49,005	49,515	24,758
Diazinon	2	0	1,060	.	1,609	.	2,669	1,335
Zinc (Fume or Dust)[M]	2	0	1,223	.	.	.	1,223	612
Titanium Tetrachloride	2	0	.	.	.	.	0	0
Hydrogen Fluoride	2	0	.	.	.	.	0	0
Abamectin	2	0	.	.	5,582	.	5,582	2,791
Antimony Compounds[M]	1	0	53,200	.	.	.	53,200	53,200
Chromium Compounds[C, M]	1	250	260	.	5	.	515	515
Cobalt Compounds[C, M]	1	2,920	.	.	.	.	2,920	2,920
Selenium Compounds[M]	1	260	.	.	13,641	.	13,901	13,901
Famphur	1	0	.	.	1,540	.	1,540	1,540
Carbon Tetrachloride[C, O]	1	40	.	.	45,782	.	45,822	45,822
Phenytoin[C]	1	0	19,300	.	.	.	19,300	19,300
Dichlorvos[C]	1	0	250	.	250	.	500	500
1,1,1-Trichloroethane[O]	1	0	.	106,250	.	.	106,250	106,250
Bromomethane[O]	1	0	.	.	.	.	0	0
Chloroethane	1	0	.	.	2,489	.	2,489	2,489
Carbon Disulfide	1	1,120	.	.	18	11,390	12,528	12,528
Phosgene	1	0	.	.	.	.	0	0
Dimethyl Sulfate[C]	1	0	.	.	.	.	0	0
Isobutyraldehyde	1	0	.	8,647	640	.	9,287	9,287
Sec-butyl Alcohol	1	0	.	.	.	.	0	0
Methyl Chlorocarbonate	1	0	.	.	.	.	0	0
Quinoline	1	0	.	.	250	.	250	250
Biphenyl	1	0	.	.	.	.	0	0
O-xylene	1	0	.	.	100,000	61,800	161,800	161,800
1,2-Dichlorobenzene	1	6,480	.	.	14,000	91,891	112,371	112,371
1,2,4-trimethylbenzene	1	4,800	.	.	.	.	4,800	4,800
Cumene	1	1,167	.	.	.	.	1,167	1,167
Acetophenone	1	0	.	.	.	.	0	0
Nitrobenzene	1	5	.	.	5,914	.	5,919	5,919
Allyl Chloride	1	0	.	.	.	.	0	0
Chloromethyl Methyl Ether[C]	1	0	.	.	.	.	0	0
Maleic Anhydride	1	0	.	.	.	.	0	0
Chlorobenzene	1	0	.	.	.	179,228	179,228	179,228
Cyclohexanol	1	0	.	.	.	.	0	0
2-ethoxyethanol	1	4	.	.	25,004	.	25,008	25,008
Propylene	1	0	.	.	.	.	0	0
N,N-dimethylaniline	1	10,000	.	.	.	328,000	338,000	338,000
Malathion	1	0	26	.	273	.	299	299
Thiabendazole	1	271	.	.	.	2,160	2,431	2,431
Ethyl Chloroformate	1	0	.	.	.	.	0	0
1,3-Dichlorobenzene	1	1,400	.	.	.	.	1,400	1,400
Lithium Carbonate	1	0	.	.	750	.	750	750
N-methyl-2-pyrrolidone	1	249,000	.	.	.	.	249,000	249,000
Tetrachlorvinphos	1	0	4,200	.	.	.	4,200	4,200
Trifluralin	1	0	18,000	.	.	.	18,000	18,000
Benfluralin	1	0	14,000	.	.	.	14,000	14,000
Prometryn	1	0	.	.	203	.	203	203
Nickel[C, M]	1	0	18	400,000	.	.	400,018	400,018
Thiophanate-methyl	1	0	.	.	2,677	.	2,677	2,677
Sodium Azide	1	0	.	.	.	.	0	0
Vinclozolin	1	0	.	.	1,030	.	1,030	1,030
Permethrin	1	0	.	.	.	.	0	0
Propiconazole	1	0	.	.	1,025	.	1,025	1,025
	200**	19,119,179	1,394,801	18,168,783	27,330,633	81,213,752	147,239,047	736,195

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Pharmaceutical Manufacturing Facilities Reporting Only SIC 2833 and 2834*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	Pharmacia & Upjohn Co., Portage, Michigan	8,307,190
2	Eli Lilly & Co. - Tippecanoe Labs, Shadeland, Indiana	2,504,810
3	Warner-Lambert Co., Holland, Michigan	2,295,005
4	Upjohn Mfg., Co., Barceloneta, Puerto Rico	2,001,450
5	Pfizer Inc., Groton, Connecticut.	1,761,385
6	Eli Lilly & Co - Clinton Laboratories, Clinton, Indiana	1,282,605
7	Abbott Chemicals, Inc., Barceloneta, Puerto Rico	1,193,707
8	Pfizer Inc., Southport, North Carolina	1,164,350
9	Schering-Plough Products, Inc., Las Piedras, Puerto Rico	756,089
10	Biokyowa Inc., Cape Girardeau, Missouri	669,869

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 2833 and 2834 or SIC 2833 and 2834 and Other SIC Codes*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	Pharmacia & Upjohn Co., Portage, Michigan	2834	8,307,190
2	Monsanto Co., Luling, Louisiana	2819, 2834, 2842, 2865, 2869, 2873, 2879	5,698,031
3	Eli Lilly & Co. - Tippecanoe Labs, Shadeland, Indiana	2834	2,504,810
4	Warner-Lambert Co., Holland, Michigan	2834	2,295,005
5	Upjohn Mfg., Co., Barceloneta, Puerto Rico	2834	2,001,450
6	Pfizer Inc., Groton, Connecticut.	2833	1,761,385
7	Ethyl Corp., Orangeburg, South Carolina	2834, 2869, 2969	1,284,456
8	Eli Lilly & Co - Clinton Laboratories, Clinton, Indiana	2833, 2834	1,282,605
9	Dow Chemical Co., Midland, Michigan	2819, 2821, 2824, 2834, 2865, 2869, 2879, 2979	1,228,629
10	Abbott Chemicals, Inc., Barceloneta, Puerto Rico	2833, 2834	1,193,707

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for the Pharmaceuticals Industry (SIC 2833 and 2834) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	324	50%	14%	2%	34%	5%	22%	13%	11%
1995	382	46%	17%	2%	34%	5%	22%	12%	10%
1996	404	---	19%	2%	37%	5%	19%	10%	8%
1997	414	---	20%	2%	36%	6%	18%	10%	8%

Source: *Toxics Release Inventory Database, 1995.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Pharmaceutical Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	8	5	11	44	0	0	0%	0%	--
II	60	53	624	6	21	95	84%	16%	0.15
III	18	16	111	10	3	3	100%	0%	0.03
IV	24	17	227	6	4	12	83%	17%	0.05
V	22	16	143	9	4	5	60%	40%	0.03
VI	5	5	17	18	1	4	0%	100%	0.24
VII	12	8	37	19	1	1	100%	0%	0.03
VIII	6	5	22	16	0	0	0%	0%	--
IX	8	3	7	69	0	0	0%	0%	--
X	1	1	2	30	1	2	50%	50%	1.00
TOTAL	164	129	1,201	8	35	122	80%	20%	0.10

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Organic Chemicals

1995 TRI Releases for Organic Chemicals Facilities (SIC 286) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Methanol	188	3,556,022	5,942,568	27,804	9,533,100	195,159	19,254,653	102,418
Ammonia	116	800,537	2,880,564	187,315	4,606,974	57,711	8,533,101	73,561
Toluene	112	911,733	1,311,526	3,068	53,999	1,806	2,282,132	20,376
Xylene (Mixed Isomers)	87	612,152	158,183	2,496	5,077	204	778,112	8,944
Benzene[C]	75	520,357	896,812	1,174	91,235	3,212	1,512,790	20,171
Hydrochloric Acid (1995 and after "Acid	72	205,548	1,082,423	5	0	581	1,288,557	17,897
Ethylene Glycol	67	623,106	85,828	34,800	12,506,710	52,311	13,302,755	198,549
Chlorine	67	70,266	190,621	1,589	0	0	262,476	3,918
Formaldehyde[C]	65	128,698	345,089	7,818	60,420	1,540	543,565	8,363
N-butyl Alcohol	56	303,277	152,807	12,045	1,411,757	6	1,879,892	33,570
Phenol	55	328,964	197,844	3,232	1,207,866	316	1,738,222	31,604
Certain Glycol Ethers	52	136,192	24,684	16,270	0	611	177,757	3,418
Styrene[C]	49	164,873	413,087	438	209,945	520	788,863	16,099
Ethylbenzene	48	150,556	195,678	581	473,272	52	820,139	17,086
Naphthalene	47	283,622	335,179	23,108	15,000	9,252	666,161	14,174
Phosphoric Acid	47	15,428	386	0	0	32,935	48,749	1,037
Ethylene	43	3,184,844	4,900,224	5	0	0	8,085,073	188,025
Zinc Compounds[M]	41	7,418	10,799	8,133	15,132	102,310	143,792	3,507
Propylene	40	1,858,547	2,609,425	0	0	0	4,467,972	111,699
Maleic Anhydride	39	35,316	33,885	1	0	0	69,202	1,774
Sulfuric Acid	39	20,228	68,898	0	0	944	90,070	2,309
N-hexane	38	551,821	775,199	5	0	4	1,327,029	34,922
Copper Compounds[M]	35	1,175	1,575	4,034	150,811	43,423	201,018	5,743
Cyclohexane	33	306,553	494,620	9,743	185,143	210	996,269	30,190
Dichloromethane[C]	29	84,840	398,816	384	200,000	0	684,040	23,588
Methyl Ethyl Ketone	28	100,790	95,962	45	374,894	0	571,691	20,418
Nitrate Compounds	27	10	1,260	17,994,769	2,805,000	1	20,801,040	770,409
Formic Acid	26	85,167	29,930	10,400	5,225,000	3,200	5,353,697	205,911
Acetaldehyde[C]	26	205,219	272,511	1,526	288,301	470	768,027	29,540
Acrylic Acid	26	202,740	52,774	5	430,000	0	685,519	26,366
Cumene	26	174,942	461,932	132	9,403	0	646,409	24,862
Nitric Acid	25	10,516	2,115	0	15,797,900	224	15,810,755	632,430
Barium Compounds[M]	24	6,944	2,109	4,982	0	0	14,035	585
Biphenyl	24	29,944	10,835	3,520	24,837	2,811	71,947	2,998
1,3-butadiene[C]	24	319,052	276,491	528	0	224	596,295	24,846
Chloromethane	23	130,989	928,953	924	0	0	1,060,866	46,125
Phthalic Anhydride	23	22,816	18,422	0	0	0	41,238	1,793
1,2,4-trimethylbenzene	23	7,218	12,336	187	179	192	20,112	874
Ethylene Oxide[C]	22	193,094	96,860	4,828	130,000	2,200	426,982	19,408
Propylene Oxide[C]	22	167,253	210,667	8,400	22,577	4,000	412,897	18,768
Chromium Compounds[C, M]	20	67	1,979	963	10,540	1,233	14,782	739
Aniline	20	71,960	27,913	320	367,740	5	467,938	23,397
Diethanolamine	20	37,610	1,266	11,585	0	39,978	90,439	4,522
Sodium Nitrite	20	1,105	277	3,290	412,000	2	416,674	20,834
Methyl Isobutyl Ketone	19	888,818	259,655	1,058	2,100	5	1,151,636	60,612
Nickel Compounds[C, M]	18	766	1,172	1,542	64,483	311	68,274	3,793
Chloroethane	18	39,533	245,268	1,918	0	5	286,724	15,929
Anthracene	18	6,033	4,120	4,304	0	1,641	16,098	894
Tert-butyl Alcohol	16	386,200	19,662	3,821	545,321	0	955,004	59,688
Tetrachloroethylene[C]	16	27,765	16,549	88	0	0	44,402	2,775
Polycyclic Aromatic Compounds[C]	15	30,209	31,721	85	0	370	62,385	4,159
N,N-dimethylformamide[C]	15	52,011	3,718	278	0	5	56,012	3,734
Acrylonitrile[C]	15	22,724	41,616	0	991,043	1	1,055,384	70,359
1,2-Dichloroethane[C]	14	236,632	36,472	21	0	0	273,125	19,509
Methyl Tert-butyl Ether	14	47,300	90,275	549	2,644	0	140,768	10,055
Acetonitrile	13	78,054	70,892	503	4,860,695	7	5,010,151	385,396
Dichlorodifluoromethane[O]	13	263,980	160,603	2	26	0	424,611	32,662
O-xylene	13	49,177	25,458	10	0	0	74,645	5,742
Methyl Acrylate	13	29,310	88,107	250	159	0	117,826	9,064
Chlorobenzene	13	32,791	18,090	39	8,405	5	59,330	4,564
N-methyl-2-pyrrolidone	13	1,200	951	0	768,287	570	771,008	59,308
Creosote[C]	13	77,601	66,084	5	0	0	143,690	11,053
Chlorodifluoromethane[O]	12	313,060	162,552	24	22	0	475,658	39,638
Dimethyl Sulfate[C]	12	2,146	731	0	0	0	2,877	240

1995 TRI Releases for Organic Chemicals Facilities (SIC 286) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Trichloroethylene[C]	12	36,879	2,446	10	0	0	39,335	3,278
Vinyl Acetate[C]	12	395,964	643,869	140	701,078	0	1,741,051	145,088
Cresol (Mixed Isomers)	12	50,646	23,313	15	545,146	85	619,205	51,600
Chloroform[C]	11	2,877	13,200	10	0	0	16,087	1,462
1,1,1-Trichloroethane[O]	11	31,822	261,153	0	0	0	292,975	26,634
Carbon Disulfide	11	32,793	31,820	13	3,980	0	68,606	6,237
Allyl Alcohol	11	30,939	9,102	2,700	143,801	0	186,542	16,958
Triethylamine	11	13,260	10,307	464	27,470	0	51,501	4,682
Dimethylamine	11	22,139	23,334	0	45,000	0	90,473	8,225
Cobalt Compounds[C, M]	10	52	5,208	62,699	0	22,202	90,161	9,016
Hydrogen Cyanide	10	18,440	215,446	0	343,154	3	577,043	57,704
Dicyclopentadiene	10	80,593	14,249	1,442	0	331	96,615	9,662
Pyridine	10	13,912	2,526	0	248,000	0	264,438	26,444
Dibenzofuran	10	8,601	5,995	2,838	0	220	17,654	1,765
Ethyl Acrylate[C]	10	30,882	3,803	0	0	0	34,685	3,469
Nickel[C, M]	10	256	3,418	5	35	62	3,776	378
Bromine	10	4,856	5,425	0	0	0	10,281	1,028
Freon 113[O]	9	15,093	11,146	27	6	0	26,272	2,919
Sec-butyl Alcohol	9	6,890	38,673	4,956	88,172	0	138,691	15,410
Acrylamide[C]	9	2,076	546	0	2,000,000	69	2,002,691	222,521
Methyl Methacrylate	9	34,655	140,844	750	0	0	176,249	19,583
Acetophenone	9	10,090	33,231	0	629,201	0	672,522	74,725
Benzyl Chloride	9	6,197	112	13	0	240	6,562	729
Epichlorohydrin[C]	9	8,641	1,778	255	0	17,889	28,563	3,174
M-cresol	9	9,067	6,026	1,600	680,000	0	696,693	77,410
Hydroquinone	9	284	5	0	68,000	43	68,332	7,592
Butyl Acrylate	9	50,819	35,571	2,700	0	0	89,090	9,899
Cumene Hydroperoxide	8	24,433	1,070	68	280,000	0	305,571	38,196
Phenanthrene	8	7,392	13,171	15	0	250	20,828	2,604
Benzoyl Chloride	8	8,788	1,290	0	0	0	10,078	1,260
P-cresol	8	7,091	8,815	801	340,000	0	356,707	44,588
Diphenylamine	8	26,959	10,489	200	260	0	37,908	4,739
Butyraldehyde	8	56,990	19,787	5	65,783	10	142,575	17,822
3,3'-dichlorobenzidine Dihydrochloride[C]	8	0	0	0	0	0	0	0
Hydrogen Fluoride	8	5,214	7,688	0	0	0	12,902	1,613
Antimony Compounds[M]	7	21	257	52	0	0	330	47
Lead Compounds[C, M]	7	5,023	500	253	0	0	5,776	825
Manganese Compounds[M]	7	1,206	33,760	131,000	0	74,000	239,966	34,281
Diethyl Sulfate[C]	7	12	12	0	0	0	24	3
Trichlorofluoromethane[O]	7	25,220	57,261	10	22	0	82,513	11,788
Isobutyraldehyde	7	34,151	6,401	250	44,075	47	84,924	12,132
Quinoline	7	2,796	3,577	15	13,000	150	19,538	2,791
O-Toluidine[C]	7	1,194	139	0	10,140	7	11,480	1,640
M-xylene	7	68,284	62,210	5	0	0	130,499	18,643
Propionaldehyde	7	31,271	8,197	5	21,432	0	60,905	8,701
Dimethyl Phthalate	7	4,183	1,258	14	250	5	5,710	816
Molybdenum Trioxide	7	100	1,700	0	75,000	20,595	97,395	13,914
Cyanide Compounds	6	24,012	1,155	15,647	1,338,824	808	1,380,446	230,074
Carbon Tetrachloride[C, O]	6	16,878	5,233	2	0	0	22,113	3,686
Chloroacetic Acid	6	3,751	344	0	0	0	4,095	683
4,4'-isopropylidenediphenol	6	67,876	15,015	250	82,000	0	165,141	27,524
P-xylene	6	126,406	1,329,212	19	0	2	1,455,639	242,607
Acrolein	6	681	1,092	0	505	0	2,278	380
Cyclohexanol	6	10,872	76,473	0	2,323,000	0	2,410,345	401,724
1,2,4-trichlorobenzene	6	8,856	61,707	0	0	0	70,563	11,761
N,N-dimethylaniline	6	2,452	2,541	250	0	0	5,243	874
1,1-dichloro-1-fluoroethane[O]	6	78,224	84,208	0	26	0	162,458	27,076
Boron Trifluoride	6	2,268	1,040	0	0	0	3,308	551
Diisocyanates	5	3,133	281	0	0	0	3,414	683
Vinyl Chloride[C]	5	65,197	3,647	0	0	0	68,844	13,769
Hydrazine[C]	5	5,774	1,312	0	0	0	7,086	1,417
Cadmium Compounds[C, M]	4	261	656	0	0	0	917	229
Dichlorotetrafluoroethane (CFC-114)[O]	4	1,776	1,363	0	0	0	3,139	785
Monochloropentafluoroethane[O]	4	11,692	10,072	0	3	0	21,767	5,442

1995 TRI Releases for Organic Chemicals Facilities (SIC 286) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
1,1,2-trichloroethane	4	2,301	84	0	0	0	2,385	596
1,1,2,2-tetrachloroethane	4	121	15	0	0	0	136	34
Dibutyl Phthalate	4	551	810	0	390,000	0	391,361	97,840
Benzoyl Peroxide	4	250	796	0	0	0	1,046	262
O-cresol	4	2,139	4,336	47	590,000	0	596,522	149,131
Allyl Chloride	4	3,610	2,024	0	0	0	5,634	1,409
2-ethoxyethanol	4	23,631	19,331	890	0	0	43,852	10,963
Di(2-ethylhexyl) Phthalate[C]	4	2,845	5	0	0	0	2,850	713
1,4-Dioxane[C]	4	12,802	230	8,699	0	5,700	27,431	6,858
Copper[M]	4	0	170	292	0	0	462	116
Vinylidene Chloride	3	316	345	0	0	0	661	220
Phosgene	3	5	5	0	0	0	10	3
O-anisidine[C]	3	506	55	74	0	0	635	212
4,4'-methylenedianiline[C]	3	2,150	260	0	110	0	2,520	840
P-phenylenediamine	3	250	250	0	0	0	500	167
1,2-butylene Oxide	3	225	1,606	0	0	0	1,831	610
2-methoxyethanol	3	14,017	600	3,130	0	0	17,747	5,916
2,2-dichloro-1,1,1-trifluoroethane[O]	3	3,155	7,100	1	0	0	10,256	3,419
4,6-dinitro-o-cresol	3	20	54	0	0	0	74	25
1,2-dichloroethylene	3	113	46	0	0	0	159	53
Asbestos (Friable)[C]	3	0	0	0	0	0	0	0
2-chloro-1,1,1,2-tetrafluoroethane[O]	3	17,024	876	0	0	0	17,900	5,967
Crotonaldehyde	3	3,259	3,100	0	390,000	0	396,359	132,120
Silver[M]	3	0	9	140	0	0	149	50
Silver Compounds[M]	2	88	0	0	0	1,700	1,788	894
Isopropyl Alcohol (Manufacturing,	2	78	262	0	0	0	340	170
Bromomethane[O]	2	6,200	717,200	0	0	0	723,400	361,700
1-chloro-1,1-difluoroethane[O]	2	14,038	17,371	0	6	0	31,415	15,708
2-nitrophenol	2	5	2	0	0	0	7	4
Dinitrobutyl Phenol	2	5	5	0	0	0	10	5
Picric Acid	2	0	0	0	24,256	0	24,256	12,128
1,2-Dichlorobenzene	2	5	8,529	1	0	0	8,535	4,268
1,2-phenylenediamine	2	41	8	0	0	0	49	25
Benzoic trichloride[C]	2	3,526	4	0	0	0	3,530	1,765
Nitrobenzene	2	255	42	0	0	0	297	149
5-nitro-o-toluidine	2	0	5	0	0	0	5	3
2,4-Dimethylphenol	2	460	803	26	79,000	0	80,289	40,145
P-Chloroaniline[C]	2	6	251	0	0	0	257	129
Quinone	2	0	1	0	0	0	1	1
1,2-Dibromoethane[C]	2	2,174	1,351	0	0	0	3,525	1,763
Propargyl Alcohol	2	33	1,987	0	290,680	0	292,700	146,350
1,3-phenylenediamine	2	0	5	0	0	0	5	3
2-methylpyridine	2	68,000	31	0	41,720	0	109,751	54,876
Hexachlorobenzene[C]	2	15	0	0	0	0	15	8
P-Cresidine[C]	2	1,706	2,900	0	0	0	4,606	2,303
Chloroprene	2	11	13	0	0	0	24	12
Sodium Dimethyldithiocarbamate	2	0	0	0	0	0	0	0
1-chloro-1,1,2,2-tetrafluoroethane[O]	2	253	250	0	0	0	503	252
Antimony[M]	2	250	0	0	0	0	250	125
Cobalt[C, M]	2	0	2,800	13,672	0	530	17,002	8,501
Ethylenebisdithiocarbamic Acid, Salts and	1	0	0	0	0	0	0	0
Polychlorinated Alkanes	1	250	250	0	0	0	500	500
Acetamide[C]	1	2	1	0	430,000	0	430,003	430,003
Hexachloroethane	1	1	0	0	0	0	1	1
Methyl Iodide	1	3,300	5	0	10,000	0	13,305	13,305
Methylene Bromide	1	287	2,830	0	0	0	3,117	3,117
Dichlorofluoromethane	1	3	0	2	0	0	5	5
Bromotrifluoromethane[O]	1	250	0	0	0	0	250	250
2-methyllactonitrile	1	0	430	0	0	0	430	430
2-chloro-1,1,1-trifluoroethane[O]	1	2,608	0	0	0	0	2,608	2,608
Hexachlorocyclopentadiene	1	7,450	72	0	0	0	7,522	7,522
1,2-Dichloropropane	1	143	0	0	0	0	143	143
2,3-dichloropropene	1	0	0	0	0	0	0	0
Peracetic Acid	1	10	828	0	0	0	838	838

1995 TRI Releases for Organic Chemicals Facilities (SIC 286) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Methyl Chlorocarbonate	1	750	5	0	0	0	755	755
Saccharin (Manufacturing, No Supplier	1	90	9	0	0	0	99	99
2,6-xylidine[C]	1	1	16	0	0	0	17	17
Hexachloro-1,3-butadiene[C]	1	1	0	0	0	0	1	1
Dihydrosafrole[C]	1	250	5	0	0	0	255	255
Safrole[C]	1	250	5	0	0	0	255	255
2,4-Diaminotoluene[C]	1	0	0	0	0	0	0	0
Styrene Oxide[C]	1	1	3	0	0	0	4	4
Ethylene Thiourea[C]	1	5	5	0	0	0	10	10
5-Nitro-o-Anisidine	1	5	5	0	0	0	10	10
p-Nitroaniline	1	0	2	0	0	0	2	2
4-Nitrophenol	1	290	11	0	0	0	301	301
P-anisidine	1	0	5	0	0	0	5	5
Bis(2-chloroethyl) Ether	1	8	0	0	0	0	8	8
Catechol	1	0	0	0	0	0	0	0
2,4-Dichlorophenol	1	5	5	0	0	0	10	10
Ethyleneimine[C]	1	0	3	0	0	0	3	3
Bromochlorodifluoromethane[O]	1	0	1	0	0	0	1	1
3,3-dichloro-1,1,1,2,2-pentafluoro-propane	1	250	5	0	0	0	255	255
1,3-dichloro-1,1,2,2,3-pentafluoro-propane	1	250	5	0	0	0	255	255
Dazomet	1	0	0	0	0	0	0	0
1,3-Dichlorobenzene	1	0	0	0	0	0	0	0
2,6-dimethylphenol	1	100	200	7	33,000	0	33,307	33,307
Methyl Isocyanate	1	0	0	0	0	0	0	0
1,1,1,2-tetrachloroethane	1	5	5	0	0	0	10	10
Carbofuran	1	0	0	0	0	0	0	0
Dimethyl Chlorothiophosphate	1	5	5	0	51,677	0	51,687	51,687
C.I. Disperse Yellow 3	1	101	0	27	0	0	128	128
Aluminum (Fume or Dust)[M]	1	292	105	0	0	0	397	397
Manganese[M]	1	0	0	0	0	0	0	0
Cadmium[C, M]	1	0	0	0	0	0	0	0
Chromium[M]	1	0	0	250	0	0	250	250
Zinc (Fume or Dust)[M]	1	5	0	0	0	0	5	5
Titanium Tetrachloride	1	0	0	.	0	0	0	0
Phosphorus (Yellow or White)	1	0	0	0	0	0	0	0
Ozone	1	750	5	0	0	0	755	755
Hydrazine Sulfate[C]	1	0	0	0	0	0	0	0
3,3'-dimethoxybenzidine	1	0	0	0	0	0	0	0
Dichlorobenzene (Mixed Isomers)[C]	1	200	10	0	0	0	210	210
Diaminotoluene (Mixed Isomers)[C]	1	1,300	3	0	0	0	1,303	1,303
Toluene Diisocyanate (Mixed Isomers)[C]	1	0	8	0	0	0	8	8
Norflurazon	1	0	0	0	0	0	0	0
C.I. Direct Blue 218	1	5	5	0	0	0	10	10
Dichlorotrifluoroethane[O]	1	750	250	0	0	0	1,000	1,000
	402**	21,080,391	31,531,516	18,661,705	76,315,809	705,515	148,294,936	368,893

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Organic Chemicals Facilities (SIC 286) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg Transfer Per Facility
Methanol	188	15,677,637	510,796	6,082,219	5,474,463	22,794,521	50,539,636	268,828
Ammonia	116	1,399,983	205,248	3,762,150	230,440	4,470	5,602,291	48,296
Toluene	112	17,426	79,131	239,287	3,112,917	6,294,423	9,743,184	86,993
Xylene (Mixed Isomers)	87	53,628	209,798	268,948	596,258	7,844,111	8,972,743	103,135
Benzene[C]	75	1,092	24,716	265,392	308,713	332,785	932,698	12,436
Hydrochloric Acid (1995 and after "Acid	72	17,277	10,677	.	300,404	.	328,358	4,561
Ethylene Glycol	67	5,073,331	69,849	789,522	3,446,170	5,539,172	14,918,044	222,657
Chlorine	67	31,620	2,845	.	214,026	820	249,311	3,721
Formaldehyde[C]	65	114,303	9,046	259	174,409	1,283	299,300	4,605
N-butyl Alcohol	56	303,571	163,207	844	218,412	2,696,887	3,382,921	60,409
Phenol	55	773,525	141,728	281,746	407,138	701,209	2,305,346	41,915
Certain Glycol Ethers	52	2,490,787	137,992	0	165,676	879,735	3,674,190	70,658
Styrene[C]	49	34,861	88,327	7,153	620,708	1,690,228	2,441,277	49,822
Ethylbenzene	48	8,134	119,270	6,756	40,657	1,984,858	2,159,675	44,993
Naphthalene	47	3,397	200,472	37,775	828,814	1,141,890	2,212,348	47,071
Phosphoric Acid	47	26,031	13,200	.	1,610	12	40,853	869
Ethylene	43	250	.	.	1,800	.	2,050	48
Zinc Compounds[M]	41	9,022	732,877	154,221	140,200	28,656	1,064,976	25,975
Propylene	40	0	.	.	59,000	.	59,000	1,475
Maleic Anhydride	39	306	211	.	938,514	19,081	958,112	24,567
Sulfuric Acid	39	350	19,999	1,469,690	111,938	.	1,601,977	41,076
N-hexane	38	2,851	194	.	1,293,686	403,575	1,700,306	44,745
Copper Compounds[M]	35	23,980	298,016	2,169,104	24,864	1	2,515,965	71,885
Cyclohexane	33	38	1,526	1,121,461	312,172	562,385	1,997,582	60,533
Dichloromethane[C]	29	50	410	603,889	862,867	455,032	1,922,248	66,284
Methyl Ethyl Ketone	28	93,077	9,752	3,255	287,389	1,370,503	1,763,976	62,999
Nitrate Compounds	27	5,512,576	2,801,184	.	1,759,900	.	10,073,660	373,099
Formic Acid	26	813	14,950	18	120	153,130	169,031	6,501
Acetaldehyde[C]	26	43,271	46	18	936,878	119,919	1,100,132	42,313
Acrylic Acid	26	44,356	25,083	.	215,105	4,722,570	5,007,114	192,581
Cumene	26	15,911	273	2,793	13,796	968,482	1,001,255	38,510
Nitric Acid	25	350	238,131	.	66,500	.	304,981	12,199
Barium Compounds[M]	24	64,996	602,384	5,981	13,695	12,267	699,323	29,138
Biphenyl	24	130,650	9,478	12,317	53,239	136,156	341,840	14,243
1,3-butadiene[C]	24	250	138	.	88	82	558	23
Chloromethane	23	932	8	.	160,682	500	162,122	7,049
Phthalic Anhydride	23	45,843	10,157	.	56,842	2,887,497	3,000,339	130,450
1,2,4-trimethylbenzene	23	56,014	643	3,031	622	112,950	173,260	7,533
Ethylene Oxide[C]	22	38,524	8,501	.	.	.	47,025	2,138
Propylene Oxide[C]	22	142,316	8,445	.	4,974	280,534	436,269	19,830
Chromium Compounds[C, M]	20	5,738	40,080	41,359	46,513	12	133,702	6,685
Aniline	20	825,971	3,253	.	31,922	133,486	994,632	49,732
Diethanolamine	20	155,009	71,607	.	1,273	28,294	256,183	12,809
Sodium Nitrite	20	146,130	1,841	.	257,800	.	405,771	20,289
Methyl Isobutyl Ketone	19	68,153	116	827	182,018	616,860	867,974	45,683
Nickel Compounds[C, M]	18	2,217	19,081	498,730	200,469	33	720,530	40,029
Chloroethane	18	10	.	154,000	472,918	12,350	639,278	35,515
Anthracene	18	260	33,490	0	1,131	37,616	72,497	4,028
Tert-butyl Alcohol	16	538,689	19,504	.	833,819	26,225,663	27,617,675	1,726,105
Tetrachloroethylene[C]	16	8	.	35,063	191,220	76,969	303,260	18,954
Polycyclic Aromatic Compounds[C]	15	48	27,368	3,677	611	1	31,705	2,114
N,N-dimethylformamide[C]	15	794	250	.	409,505	406,711	817,260	54,484
Acrylonitrile[C]	15	14,718	13	.	397,239	552,140	964,110	64,274
1,2-Dichloroethane[C]	14	282	505	178,600	241,228	72,368	492,983	35,213
Methyl Tert-butyl Ether	14	505	47,345	.	139,661	272,996	460,507	32,893
Acetonitrile	13	259	1,286	.	45,263	208,706	255,514	19,655
Dichlorodifluoromethane[O]	13	1	.	.	.	.	1	0
O-xylene	13	30,134	331	38,470	113,451	822,151	1,004,537	77,272
Methyl Acrylate	13	739	.	.	69,950	11,070	81,759	6,289
Chlorobenzene	13	1,874	860	23,160	261,641	1,666	289,201	22,246
N-methyl-2-pyrrolidone	13	104,853	15,302	104,076	6,090	7,210	237,531	18,272
Creosote[C]	13	0	39,005	0	1,881	.	40,886	3,145
Chlorodifluoromethane[O]	12	0	14,000	122	193,700	.	207,822	17,319
Dimethyl Sulfate[C]	12	0	.	171,230	.	.	171,230	14,269

1995 TRI Transfers for Organic Chemicals Facilities (SIC 286) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg Transfer Per Facility
Trichloroethylene[C]	12	18	.	6,895	55,894	30,614	93,421	7,785
Vinyl Acetate[C]	12	75,231	9,600	.	63,682	440,039	588,552	49,046
Cresol (Mixed Isomers)	12	4,026	3,957	0	948,529	.	956,512	79,709
Chloroform[C]	11	260	.	3,170	184,193	15,182	202,805	18,437
1,1,1-Trichloroethane[O]	11	1	.	12,943	406,184	213,946	633,074	57,552
Carbon Disulfide	11	6,290	21	.	303	204,600	211,214	19,201
Allyl Alcohol	11	5,282	8,395	.	80,761	362,951	457,389	41,581
Triethylamine	11	67,498	.	.	55,999	28,784	152,281	13,844
Dimethylamine	11	96,495	.	.	115,208	.	211,703	19,246
Cobalt Compounds[C, M]	10	14	18,767	49,516	91	1	68,389	6,839
Hydrogen Cyanide	10	9,108	326	.	97	250	9,781	978
Dicyclopentadiene	10	5	20	500	18,300	217,414	236,239	23,624
Pyridine	10	32,435	17	2,243	33,335	5,087	73,117	7,312
Dibenzofuran	10	250	17,974	2,429	2	20	20,675	2,068
Ethyl Acrylate[C]	10	500	8,800	.	6,203	1,332,449	1,347,952	134,795
Nickel[C, M]	10	805	26,760	521,930	43,204	.	592,699	59,270
Bromine	10	997	.	.	283,212	.	284,209	28,421
Freon 113[O]	9	0	136	44,467	369,897	91,994	506,494	56,277
Sec-butyl Alcohol	9	263	6,977	.	15,902	3,793,211	3,816,353	424,039
Acrylamide[C]	9	170,931	640	.	19,609	42,556	233,736	25,971
Methyl Methacrylate	9	262	36	.	102,625	1,583	104,506	11,612
Acetophenone	9	3,506	6,235	.	6,669	299,760	316,170	35,130
Benzyl Chloride	9	292	3,003	.	.	.	3,295	366
Epichlorohydrin[C]	9	250	.	.	17,889	.	18,139	2,015
M-cresol	9	7,726	2,699	1,503,812	67,501	230	1,581,968	175,774
Hydroquinone	9	3,714	1,700	.	5,506	.	10,920	1,213
Butyl Acrylate	9	250	32,300	.	5,764	28,935	67,249	7,472
Cumene Hydroperoxide	8	0	2,360	.	3,684	6	6,050	756
Phenanthrene	8	2,979	41,971	1,190	95	1	46,236	5,780
Benzoyl Chloride	8	0	1,460	.	900	80	2,440	305
P-cresol	8	918,994	2,168	900,000	49,934	34,133	1,905,229	238,154
Diphenylamine	8	0	18,289	2,200	4	312	20,805	2,601
Butyraldehyde	8	250	.	.	256	.	506	63
3,3'-dichlorobenzidine Dihydrochloride[C]	8	14	0	.	.	.	14	2
Hydrogen Fluoride	8	0	110	.	70,110	.	70,220	8,778
Antimony Compounds[M]	7	251	834	3,340	44,800	18,705	67,930	9,704
Lead Compounds[C, M]	7	3	70,613	.	809	2	71,427	10,204
Manganese Compounds[M]	7	110,906	1,823,098	8,400	.	.	1,942,404	277,486
Diethyl Sulfate[C]	7	11	250	6,420,000	.	.	6,420,261	917,180
Trichlorofluoromethane[O]	7	18	.	.	7,106	.	7,124	1,018
Isobutyraldehyde	7	0	.	.	77,716	567,584	645,300	92,186
Quinoline	7	250	3,579	2,243	16,107	1	22,180	3,169
O-Toluidine[C]	7	6,940	46	.	8	12	7,006	1,001
M-xylene	7	437	1,511	10,832	6,598	92,018	111,396	15,914
Propionaldehyde	7	0	.	.	.	.	0	0
Dimethyl Phthalate	7	116,235	.	.	31,265	.	147,500	21,071
Molybdenum Trioxide	7	0	17,788	71,000	50,000	.	138,788	19,827
Cyanide Compounds	6	8,200	4,125	.	5,821	.	18,146	3,024
Carbon Tetrachloride[C, O]	6	266	.	1,796	23,612	.	25,674	4,279
Chloroacetic Acid	6	0	.	.	.	.	0	0
4,4'-isopropylidenediphenol	6	250	25,898	.	440	6,800	33,388	5,565
P-xylene	6	0	673	.	2,020	990	3,683	614
Acrolein	6	0	.	.	7,026	8,010	15,036	2,506
Cyclohexanol	6	2,800	70	.	.	5,200	8,070	1,345
1,2,4-trichlorobenzene	6	500	3,050	5,030	8,511	.	17,091	2,849
N,N-dimethylaniline	6	60,829	.	.	10,497	72,643	143,969	23,995
1,1-dichloro-1-fluoroethane[O]	6	5	.	2,393	297,000	.	299,398	49,900
Boron Trifluoride	6	5	.	.	250	.	255	43
Diisocyanates	5	0	.	.	3,290	5	3,295	659
Vinyl Chloride[C]	5	0	.	54,370	609	.	54,979	10,996
Hydrazine[C]	5	6,200	23,499	.	.	.	29,699	5,940
Cadmium Compounds[C, M]	4	21	144	.	1,359	2,233	3,757	939
Dichlorotetrafluoroethane (CFC-114)[O]	4	0	136	.	11,332	.	11,468	2,867
Monochloropentafluoroethane[O]	4	0	7	.	14,069	.	14,076	3,519

1995 TRI Transfers for Organic Chemicals Facilities (SIC 286) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg Transfer Per Facility
1,1,2-trichloroethane	4	0	.	58,600	19,591	.	78,191	19,548
1,1,2,2-tetrachloroethane	4	0	.	1	51	.	52	13
Dibutyl Phthalate	4	762	.	.	1,171	7,792	9,725	2,431
Benzoyl Peroxide	4	26,619	.	.	5,507	.	32,126	8,032
O-cresol	4	85,097	1,532	3,812	34,308	230	124,979	31,245
Allyl Chloride	4	0	.	.	.	750	750	188
2-ethoxyethanol	4	388,197	.	.	.	63,122	451,319	112,830
Di(2-ethylhexyl) Phthalate[C]	4	22	.	.	.	5,602	5,624	1,406
1,4-Dioxane[C]	4	0	.	2	.	.	2	1
Copper[M]	4	0	822	59,640	28,884	.	89,346	22,337
Vinylidene Chloride	3	270	.	.	51,000	101,000	152,270	50,757
Phosgene	3	0	.	.	.	.	0	0
O-anisidine[C]	3	5,100	3	.	.	.	5,103	1,701
4,4'-methylenedianiline[C]	3	1,285	8,600	.	.	53	9,938	3,313
P-phenylenediamine	3	500	.	.	9,395	.	9,895	3,298
1,2-butylene Oxide	3	0	.	.	.	326,446	326,446	108,815
2-methoxyethanol	3	4,721	.	.	.	132,503	137,224	45,741
2,2-dichloro-1,1,1-trifluoroethane[O]	3	0	.	.	14,675	.	14,675	4,892
4,6-dinitro-o-cresol	3	0	7,220	.	3,951	410	11,581	3,860
1,2-dichloroethylene	3	0	.	2,200	10	.	2,210	737
Asbestos (Friable)[C]	3	0	136,832	.	.	.	136,832	45,611
2-chloro-1,1,1,2-tetrafluoroethane[O]	3	0	.	.	8,835	.	8,835	2,945
Crotonaldehyde	3	0	.	.	.	.	0	0
Silver[M]	3	0	610	78,811	124	.	79,545	26,515
Silver Compounds[M]	2	0	.	44,783	.	.	44,783	22,392
Isopropyl Alcohol (Manufacturing,	2	0	.	1,295	599	184,273	186,167	93,084
Bromomethane[O]	2	0	.	.	.	.	0	0
1-chloro-1,1-difluoroethane[O]	2	0	.	.	4,220	.	4,220	2,110
2-nitrophenol	2	0	.	.	1	6	7	4
Dinitrobutyl Phenol	2	0	.	.	.	.	0	0
Picric Acid	2	0	.	.	.	.	0	0
1,2-Dichlorobenzene	2	0	.	880	590	13,446	14,916	7,458
1,2-phenylenediamine	2	360	31	.	.	.	391	196
Benzoic Trichloride[C]	2	0	250	.	3,018	.	3,268	1,634
Nitrobenzene	2	1	.	.	454	4,471	4,926	2,463
5-nitro-o-toluidine	2	0	30	.	.	.	30	15
2,4-Dimethylphenol	2	0	6	2,713	53,300	.	56,019	28,010
P-Chloroaniline[C]	2	5,801	.	.	5,600	540	11,941	5,971
Quinone	2	0	.	.	1,462	1,328	2,790	1,395
1,2-Dibromoethane[C]	2	5	.	.	32,063	.	32,068	16,034
Propargyl Alcohol	2	0	935	.	.	.	935	468
1,3-phenylenediamine	2	2,000	.	.	.	.	2,000	1,000
2-methylpyridine	2	0	6	.	28	41	75	38
Hexachlorobenzene[C]	2	0	.	1	3,345	.	3,346	1,673
P-Cresidine[C]	2	41,611	2,200	.	13,000	.	56,811	28,406
Chloroprene	2	0	.	138,000	580	.	138,580	69,290
Sodium Dimethyldithiocarbamate	2	3,528	.	.	.	.	3,528	1,764
1-chloro-1,1,2,2-tetrafluoroethane[O]	2	0	.	.	.	.	0	0
Antimony[M]	2	5,413	.	.	6,797	.	12,210	6,105
Cobalt[C, M]	2	0	13,000	5,400	.	.	18,400	9,200
Ethylenebisdithiocarbamic Acid, Salts and	1	1,200	.	.	.	.	1,200	1,200
Polychlorinated Alkanes	1	5	.	.	.	.	5	5
Acetamide[C]	1	0	.	.	73	.	73	73
Hexachloroethane	1	0	.	.	350	.	350	350
Methyl Iodide	1	0	8,600	.	760	.	9,360	9,360
Methylene Bromide	1	0	.	.	.	.	0	0
Dichlorofluoromethane	1	0	.	.	18,000	.	18,000	18,000
Bromotrifluoromethane[O]	1	0	.	.	.	.	0	0
2-methyllactonitrile	1	0	.	.	0	.	0	0
2-chloro-1,1,1-trifluoroethane[O]	1	0	.	.	.	.	0	0
Hexachlorocyclopentadiene	1	709	.	.	21,836	.	22,545	22,545
1,2-Dichloropropane	1	0	.	.	0	.	0	0
2,3-dichloropropene	1	0	.	.	0	.	0	0
Peracetic Acid	1	0	.	.	.	.	0	0

1995 TRI Transfers for Organic Chemicals Facilities (SIC 286) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg Transfer Per Facility
Methyl Chlorocarbonate	1	0	.	.	.	.	0	0
Saccharin (Manufacturing, No Supplier	1	10	1,500	.	.	.	1,510	1,510
2,6-xylidine[C]	1	236	.	.	.	.	236	236
Hexachloro-1,3-butadiene[C]	1	0	.	.	.	.	0	0
Dihydrosafrole[C]	1	999	.	.	.	.	999	999
Safrole[C]	1	5	.	.	.	.	5	5
2,4-Diaminotoluene[C]	1	0	.	.	.	.	0	0
Styrene Oxide[C]	1	0	.	.	.	.	0	0
Ethylene Thiourea[C]	1	0	.	.	.	.	0	0
5-nitro-o-anisidine	1	5	.	.	.	.	5	5
p-Nitroaniline	1	7	.	.	.	.	7	7
4-nitrophenol	1	0	0	.	.	.	0	0
P-anisidine	1	5	.	.	.	.	5	5
Bis(2-chloroethyl) Ether	1	0	.	.	.	.	0	0
Catechol	1	0	.	.	.	.	0	0
2,4-Dichlorophenol	1	0	.	.	.	.	0	0
Ethyleneimine[C]	1	0	.	.	.	.	0	0
Bromochlorodifluoromethane[O]	1	0	.	.	.	.	0	0
3,3-dichloro-1,1,1,2,2-pentafluoro-propane	1	0	.	.	.	.	0	0
1,3-dichloro-1,1,2,2,3-pentafluoro-propane	1	0	.	.	.	.	0	0
Dazomet	1	0	.	.	.	.	0	0
1,3-Dichlorobenzene	1	0	.	880	590	.	1,470	1,470
2,6-dimethylphenol	1	0	2	.	8,380	.	8,382	8,382
Methyl Isocyanate	1	0	.	.	.	.	0	0
1,1,1,2-tetrachloroethane	1	0	.	.	.	.	0	0
Carbofuran	1	0	.	.	1,169	.	1,169	1,169
Dimethyl Chlorothiophosphate	1	0	.	.	.	.	0	0
C.I. Disperse Yellow 3	1	0	1,061	.	.	.	1,061	1,061
Aluminum (Fume or Dust)[M]	1	0	.	.	.	.	0	0
Manganese[M]	1	750	32,725	.	.	.	33,475	33,475
Cadmium[C, M]	1	0	.	.	.	.	0	0
Chromium[M]	1	0	.	.	5	.	5	5
Zinc (Fume or Dust)[M]	1	0	.	.	20,125	.	20,125	20,125
Titanium Tetrachloride	1	0	.	.	.	.	0	0
Phosphorus (Yellow or White)	1	0	.	.	.	.	0	0
Ozone	1	0	.	.	.	.	0	0
Hydrazine Sulfate[C]	1	1,900	.	.	.	.	1,900	1,900
3,3'-dimethoxybenzidine	1	0	.	.	.	.	0	0
Dichlorobenzene (Mixed Isomers)[C]	1	0	.	.	50	.	50	50
Diaminotoluene (Mixed Isomers)[C]	1	770	.	.	1,000	.	1,770	1,770
Toluene Diisocyanate (Mixed Isomers)[C]	1	0	.	.	.	.	0	0
Norflurazon	1	0	54,000	.	1,000	.	55,000	55,000
C.I. Direct Blue 218	1	22,434	.	.	.	.	22,434	22,434
Dichlorotrifluoroethane[O]	1	0	.	.	.	.	0	0
	402**	36,472,821	9,563,952	28,564,860	31,582,673	102,386,380	208,570,686	518,833

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Organic Chemicals Facilities Reporting Only SIC 286*		
Rank	Facility[1]	Total TRI Releases in Pounds
1	Du Pont , Victoria, Texas	25,488,181
2	BASF Corp., Freeport, Texas	19,324,697
3	Hoechst-Celanese Chemical, Pasadena, Texas	13,660,060
4	BP Chemicals Inc., Port Lavaca, Texas	13,105,950
5	Witco Corp., Harvey, Louisiana	3,888,100
6	Du Pont, Orange, Texas	3,819,536
7	Arco Chemical Co., Channelview, Texas	3,665,030
8	Merichem Co., Houston, Texas	3,129,499
9	ISP Techs. Inc., Texas City, Texas	3,037,645
10	Air Products & Chemicals Inc., Calvert City, Kentucky	3,024,442

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 286 or SIC 286 and Other SIC Codes*			
Rank	Facility[1]	SIC Codes Reported in TRI	Total TRI Releases in Pounds
1	Cytec Ind. Inc., Westwego, Louisiana	2819, 2869	27,034,568
2	Du Pont, Victoria, Texas	2869	25,488,181
3	Du Pont, Beaumont, Texas	2822, 2865, 2869, 2873	21,763,329
4	BASF Corp., Freeport, Texas	2869	19,324,697
5	Monsanto Co., Cantonment, Florida	2821, 2824, 2865, 2869	18,058,737
6	Sterling Chemicals Inc., Texas City, Texas	2819, 2865, 2869	15,720,998
7	Hoechst-Celanese Chemical, Pasadena, Texas	2869	13,660,060
8	BP Chemicals Inc., Lima, Ohio	2821, 2869	13,566,795
9	BP Chemicals Inc., Port Lavaca, Texas	2869	13,105,950
10	Exxon Chemical, Baton Rouge, Louisiana	2865, 2869, 2822	8,768,672

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Organic Chemicals Facilities (SIC 286) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	2,100	2%	25%	23%	37%	2%	5%	3%	6%
1995	2,386	15%	22%	27%	36%	1%	4%	3%	7%
1996	2,369	---	24%	27%	35%	2%	4%	3%	6%
1997	2,342	---	24%	27%	35%	1%	4%	3%	6%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity.*

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Organic Chemicals Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	15	11	34	26	2	3	33%	67%	0.09
II	63	53	646	6	24	100	79%	21%	0.15
III	35	34	382	5	13	26	92%	8%	0.07
IV	86	66	967	5	21	58	79%	21%	0.06
V	80	66	648	7	22	46	57%	43%	0.07
VI	112	98	1,416	5	67	228	55%	45%	0.16
VII	18	16	108	10	2	3	100%	0%	0.03
VIII	2	2	21	6	0	0	0%	0%	--
IX	11	6	19	35	1	2	0%	100%	0.11
X	3	3	53	3	1	2	0%	100%	0.04
TOTAL	425	355	4,294	6	153	468	65%	35%	0.11

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Petroleum Refining

1995 TRI Releases for Petroleum Refining Facilities (SIC 2911) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Benzene[C]	168	2,377,768	1,283,986	13,332	172,244	11,626	3,858,956	22,970
Toluene	165	6,662,301	2,722,039	17,441	162,200	29,226	9,593,207	58,141
Ethylbenzene	157	998,716	308,074	5,189	1,938	7,037	1,320,954	8,414
Xylene (Mixed Isomers)	156	3,763,426	1,316,901	15,568	130	39,109	5,135,134	32,918
Cyclohexane	146	1,331,517	769,508	4,956	57	6,930	2,112,968	14,472
1,2,4-trimethylbenzene	135	695,602	207,857	3,702	863	9,196	917,220	6,794
N-hexane	132	3,597,851	2,951,792	1,919	0	8,929	6,560,491	49,701
Propylene	123	5,234,486	2,801,285	3,925	0	42	8,039,738	65,364
Ammonia	116	1,685,970	6,273,572	648,618	1,361,275	33,437	10,002,872	86,232
Ethylene	113	2,301,716	844,858	4,551	0	0	3,151,125	27,886
Naphthalene	102	260,098	52,322	6,883	569	5,599	325,471	3,191
Methyl Tert-butyl Ether	87	896,363	2,056,208	69,461	594	3,319	3,025,945	34,781
1,3-butadiene[C]	75	129,590	55,748	3,663	0	0	189,001	2,520
Methanol	74	733,938	152,256	60,274	236,238	2,907	1,185,613	16,022
Chlorine	72	125,415	152,315	24,910	0	106	302,746	4,205
Cumene	59	278,122	291,651	837	0	198	570,808	9,675
Phenol	57	155,881	381,223	17,451	1,940,000	147	2,494,702	43,767
Hydrogen Fluoride	55	180,997	279,565	0	0	250	460,812	8,378
Diethanolamine	54	187,112	2,371	279,738	14,902	166	484,289	8,968
Molybdenum Trioxide	52	658	352	1,058	0	36,000	38,068	732
Phosphoric Acid	50	1,157	5	0	0	260	1,422	28
Nickel Compounds[C, M]	49	3,605	41,441	7,595	0	59,220	111,861	2,283
Sulfuric Acid	49	9,183	404,134	365	0	2,530	416,212	8,494
Polycyclic Aromatic Compounds[C]	40	19,549	10,307	2,095	0	3,312	35,263	882
Zinc Compounds[M]	40	13,166	30,175	41,862	0	14,500	99,703	2,493
Tetrachloroethylene[C]	38	42,370	4,204	115	0	1	46,690	1,229
Nitrate Compounds	34	0	0	3,720,099	0	14	3,720,113	109,415
Lead Compounds[C, M]	27	2,048	1,089	5,917	0	2,351	11,405	422
1,1,1-Trichloroethane[O]	27	96,630	11,194	188	0	0	108,012	4,000
Hydrochloric Acid (1995 and after "Acid	27	8,236	287,216	0	0	4,506	299,958	11,110
Cresol (Mixed Isomers)	25	55,078	1,168	3,819	103,736	39	163,840	6,554
Ethylene Glycol	24	64,022	21,716	15,047	0	250	101,035	4,210
Methyl Ethyl Ketone	23	4,285,050	291,337	8,193	19,000	4,705	4,608,285	200,360
Chromium Compounds[C, M]	22	16,940	12,000	9,469	0	6,348	44,757	2,034
Cobalt Compounds[C, M]	21	8	92	224	0	1,478	1,802	86
Copper Compounds[M]	17	250	820	2,708	0	2,600	6,378	375
Styrene[C]	15	6,353	67,544	204	0	25	74,126	4,942
O-xylene	14	245,825	87,343	490	569	234	334,461	23,890
P-xylene	14	813,065	190,570	486	569	249	1,004,939	71,781
1,2-Dichloroethane[C]	13	10,085	16,135	0	0	0	26,220	2,017
M-xylene	13	271,802	108,446	637	569	428	381,882	29,376
Antimony Compounds[M]	12	500	6,319	9,719	0	11,490	28,028	2,336
Tert-butyl Alcohol	12	37,577	12,166	12,027	0	1	61,771	5,148
Certain Glycol Ethers	10	5,676	46	4,320	0	135	10,177	1,018
Carbon Tetrachloride[C, O]	10	36,573	957	92	0	0	37,622	3,762
Anthracene	10	4,466	1,008	13	0	1	5,488	549
Nickel[C, M]	10	0	3,102	724	0	18	3,844	384
Biphenyl	9	7,676	2,989	174	0	0	10,839	1,204
N-methyl-2-pyrrolidone	9	253,184	51,586	190,000	0	120,458	615,228	68,359
Lead[C, M]	9	0	254	191	0	327	772	86
Manganese Compounds[M]	8	0	1,019	3,368	0	11,597	15,984	1,998
Dichlorodifluoromethane[O]	8	87,550	280	0	0	0	87,830	10,979
Phenanthrene	8	1,570	406	3	0	5	1,984	248
Asbestos (Friable)[C]	7	0	0	0	0	0	0	0
N-butyl Alcohol	6	21,505	28,375	0	0	0	49,880	8,313
1,2-Dibromoethane[C]	6	4,164	36	47	0	6	4,253	709
Methyl Isobutyl Ketone	6	212,740	21,615	15	0	466	234,836	39,139
Carbonyl Sulfide	6	493	146,000	0	0	0	146,493	24,416
Copper[M]	6	0	1,643	258	0	190	2,091	349
Barium Compounds[M]	5	0	240	4,579	0	7,015	11,834	2,367
Formaldehyde[C]	5	104	34,244	108	0	0	34,456	6,891
Carbon Disulfide	5	66	1,600	0	0	0	1,666	333
Chlorodifluoromethane[O]	5	381,678	0	0	0	0	381,678	76,336
Dicyclopentadiene	5	4,005	1,306	310	0	0	5,621	1,124
Barium[M]	5	0	50	1,992	0	1,552	3,594	719
Chromium[M]	5	0	1,515	375	0	692	2,582	516
Cobalt[C, M]	5	5	0	465	0	2	472	94
Hydrogen Cyanide	4	0	61,562	620	0	0	62,182	15,546
Cyanide Compounds	3	0	75,821	190	0	0	76,011	25,337

1995 TRI Releases for Petroleum Refining Facilities (SIC 2911) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
2-methoxyethanol	3	3,011	193	0	0	0	3,204	1,068
Arsenic Compounds[C, M]	2	0	1	160	0	0	161	81
Cadmium Compounds[C, M]	2	0	0	16	0	0	16	8
Acetonitrile	2	14,830	2,300	0	0	0	17,130	8,565
Dichloromethane[C]	2	10,945	6,500	71	0	0	17,516	8,758
Sec-butyl Alcohol	2	3,400	390	0	0	0	3,790	1,895
Cumene Hydroperoxide	2	8,660	4,000	0	0	0	12,660	6,330
O-cresol	2	0	1	0	0	0	1	1
Vinyl Acetate[C]	2	3,306	289	0	0	0	3,595	1,798
Manganese[M]	2	0	2,000	15,000	0	0	17,000	8,500
Mercury[M]	2	0	0	2	0	1	3	2
Silver[M]	2	3,800	49	8	0	0	3,857	1,929
Antimony[M]	2	0	0	13	0	2	15	8
Arsenic[C, M]	2	0	0	101	0	244	345	173
Vanadium (Fume or Dust)[M]	2	0	393	0	0	0	393	197
Zinc (Fume or Dust)[M]	2	19	2,605	1,200	0	0	3,824	1,912
Nitric Acid	2	250	250	0	0	0	500	250
Selenium[M]	2	0	0	87	0	23	110	55
Beryllium Compounds[C, M]	1	0	0	0	0	0	0	0
Diisocyanates	1	0	0	0	0	0	0	0
Mercury Compounds[M]	1	4	32	0	0	0	36	36
Selenium Compounds[M]	1	0	6	1,900	0	0	1,906	1,906
Silver Compounds[M]	1	0	0	0	0	0	0	0
Chloroform[C]	1	0	0	0	0	0	0	0
Acetaldehyde[C]	1	0	0	115	0	0	115	115
Ethylene Oxide[C]	1	6,500	2,700	0	0	0	9,200	9,200
Ethylidene Dichloride	1	0	0	0	0	0	0	0
Propylene Oxide[C]	1	72	0	0	0	0	72	72
Trichlorofluoromethane[O]	1	750	0	0	0	0	750	750
Chlorotrifluoromethane	1	250	0	.	0	0	250	250
Isobutyraldehyde	1	40	160	0	0	0	200	200
1,2-dichloropropane	1	800	0	0	0	0	800	800
2,3-dichloropropene	1	0	0	0	0	0	0	0
Trichloroethylene[C]	1	1,600	0	0	0	0	1,600	1,600
Peracetic Acid	1	12	0	0	0	0	12	12
4,4'-isopropylidenediphenol	1	5,000	0	0	0	330,000	335,000	335,000
Quinoline	1	4,200	250	0	0	250	4,700	4,700
1,2,3-trichloropropane[C]	1	6,300	320	0	0	0	6,620	6,620
Acetophenone	1	700	10	2	0	0	712	712
2,4-Dimethylphenol	1	47	0	2	0	0	49	49
P-cresol	1	0	1	0	0	0	1	1
Epichlorohydrin[C]	1	12,000	24,000	0	0	1	36,001	36,001
Allyl Chloride	1	440	0	0	0	0	440	440
Allyl Alcohol	1	3,500	5	0	0	0	3,505	3,505
M-cresol	1	0	1	0	0	0	1	1
1,3-phenylenediamine	1	750	300	0	0	0	1,050	1,050
Chlorobenzene	1	0	8	0	0	0	8	8
2-ethoxyethanol	1	0	0	0	0	0	0	0
Pyridine	1	11,000	0	9	0	0	11,009	11,009
Butyraldehyde	1	6,800	3,600	0	0	0	10,400	10,400
Ethyl Acrylate[C]	1	0	0	0	0	0	0	0
Hydrazine[C]	1	130	1	0	0	0	131	131
Polychlorinated Biphenyls[C]	1	0	0	0	0	0	0	0
Beryllium[C, M]	1	0	0	2	0	0	2	2
Cadmium[C, M]	1	0	0	3	0	1	4	4
Sodium Nitrite	1	0	0	21,652	0	0	21,652	21,652
Fluorine	1	0	0	15,000	0	0	15,000	15,000
	180**	38,741,597	24,995,323	5,287,922	4,015,453	781,751	73,822,046	410,122

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Petroleum Refining Facilities (SIC 2911) by Number and Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg Transfer Per Facility
Benzene[C]	168	211,008	14,130	56,197	48,579	16,902	346,816	2,064
Toluene	165	300,865	41,261	41,068	74,334	139,942	597,470	3,621
Ethylbenzene	157	38,203	9,664	16,148	17,768	52,082	133,866	853
Xylene (Mixed Isomers)	156	322,154	41,030	39,540	66,939	272,700	742,363	4,759
Cyclohexane	146	2,141	9,011	4,929	3,558	3,349	22,988	157
1,2,4-trimethylbenzene	135	13,084	5,327	2,204	5,135	42,643	68,393	507
N-hexane	132	2,362	10,701	3,865	8,800	2,015	27,743	210
Propylene	123	0	79	.	18	64	161	1
Ammonia	116	937,695	4,598	261	298,741	773	1,242,068	10,707
Ethylene	113	0	11	3	93	7	114	1
Naphthalene	102	3,089	11,892	622	6,300	13,550	35,453	348
Methyl Tert-butyl Ether	87	73,644	471	.	617	196	74,928	861
1,3-butadiene[C]	75	0	.	2	544	121	667	9
Methanol	74	384,200	2,440	.	906	6,076	393,622	5,319
Chlorine	72	5,748	3	.	18	258	6,027	84
Cumene	59	622	740	118	1,445	176	3,101	53
Phenol	57	968,049	30,276	20,576	420,847	668,477	2,108,225	36,986
Hydrogen Fluoride	55	0	14	.	167	.	181	3
Diethanolamine	54	1,348,360	363,856	390	8,235	.	1,720,841	31,867
Molybdenum Trioxide	52	0	624,988	1,812,236	162,803	2	2,600,029	50,001
Phosphoric Acid	50	0	451,169	1,209,400	78,458	.	1,739,027	34,781
Nickel Compounds[C, M]	49	3,266	453,321	1,278,771	17,824	116	1,753,298	35,782
Sulfuric Acid	49	0	.	.	0	.	0	0
Polycyclic Aromatic Compounds[C]	40	0	40,841	.	1,664	4,639	47,144	1,179
Zinc Compounds[M]	40	21,484	138,351	222,051	36,572	3,332	421,790	10,545
Tetrachloroethylene[C]	38	0	4	1,966	7	12	1,989	52
Nitrate Compounds	34	1,400	.	.	.	.	1,400	41
Lead Compounds[C, M]	27	0	47,350	7,696	10,476	700	66,222	2,453
1,1,1-Trichloroethane[O]	27	0	494	12,295	1,540	.	14,329	531
Hydrochloric Acid (1995 and after "Acid	27	0	.	.	24	.	24	1
Cresol (Mixed Isomers)	25	71,806	31,540	187,142	115	107	290,710	11,628
Ethylene Glycol	24	45,843	0	.	81,671	.	127,514	5,313
Methyl Ethyl Ketone	23	35,000	10,839	1,259	10,798	7,429	65,325	2,840
Chromium Compounds[C, M]	22	3,318	38,125	62,797	5,791	2,697	112,728	5,124
Cobalt Compounds[C, M]	21	0	75,702	176,323	34,850	.	286,875	13,661
Copper Compounds[M]	17	1,000	119,280	148,442	1,540	437	270,699	15,923
Styrene[C]	15	5	1,199	1,086	522	27,577	30,389	2,026
O-xylene	14	58,137	821	5,488	1,329	788	66,563	4,755
P-xylene	14	5,106	588	8,595	1,116	554	15,959	1,140
1,2-Dichloroethane[C]	13	0	.	0	.	22	22	2
M-xylene	13	13,130	833	8,889	1,352	705	24,909	1,916
Antimony Compounds[M]	12	750	24,170	50,914	19,973	.	95,807	7,984
Tert-butyl Alcohol	12	0	774	.	988	197	1,959	163
Certain Glycol Ethers	10	0	3	1,083	18	8	1,112	111
Carbon Tetrachloride[C, O]	10	0	.	0	2,201	8	2,209	221
Anthracene	10	0	0	517	20	.	537	54
Nickel[C, M]	10	46	72,244	132,962	8,673	.	213,925	21,393
Biphenyl	9	0	30	0	3	3	36	4
N-methyl-2-pyrrolidone	9	0	7,800	.	1,700	.	9,500	1,056
Lead[C, M]	9	1,387	2,686	364	5,533	.	9,970	1,108
Manganese Compounds[M]	8	1,900	.	59,000	.	0	60,900	7,613
Dichlorodifluoromethane[O]	8	0	.	141,000	250	.	141,250	17,656
Phenanthrene	8	0	972	.	1	16	989	124
Asbestos (Friable)[C]	7	0	440,082	.	.	.	440,082	62,869
N-butyl Alcohol	6	0	.	.	.	.	0	0
1,2-Dibromoethane[C]	6	0	3	.	18	18	39	7
Methyl Isobutyl Ketone	6	0	1,079	24	20	6,500	7,623	1,271
Carbonyl Sulfide	6	0	.	.	.	.	0	0
Copper[M]	6	991	2,959	1,056	236	.	5,242	874
Barium Compounds[M]	5	0	395	85	112	1,310	1,902	380
Formaldehyde[C]	5	0	.	.	.	110	110	22
Carbon Disulfide	5	0	.	.	.	.	0	0
Chlorodifluoromethane[O]	5	0	.	60,000	.	.	60,000	12,000
Dicyclopentadiene	5	250	153	.	11	.	414	83
Barium[M]	5	2,600	9,568	192	2,882	.	15,242	3,048
Chromium[M]	5	10	13,404	15,318	4	.	28,736	5,747
Cobalt[C, M]	5	0	166	36,397	.	.	36,563	7,313
Hydrogen Cyanide	4	927	.	.	.	.	927	232
Cyanide Compounds	3	42,000	35	.	6	.	42,041	14,014

1995 TRI Transfers for Petroleum Refining Facilities (SIC 2911) by Number and Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg Transfer Per Facility
2-methoxyethanol	3	0	.	.	.	.	0	0
Arsenic Compounds[C, M]	2	0	2	66	0	.	68	34
Cadmium Compounds[C, M]	2	0	0	66	51	.	117	59
Acetonitrile	2	0	.	.	.	.	0	0
Dichloromethane[C]	2	0	.	.	.	.	0	0
Sec-butyl Alcohol	2	0	.	.	.	.	0	0
Cumene Hydroperoxide	2	0	.	.	.	.	0	0
O-cresol	2	0	.	2	.	.	2	1
Vinyl Acetate[C]	2	0	.	.	294,610	917	295,527	147,764
Manganese[M]	2	1,100	.	1,900	.	.	3,000	1,500
Mercury[M]	2	9	.	.	.	.	9	5
Silver[M]	2	0	322	50,000	18	.	50,340	25,170
Antimony[M]	2	0	.	.	.	.	0	0
Arsenic[C, M]	2	0	0	.	.	.	0	0
Vanadium (Fume or Dust)[M]	2	0	3,368	1,750	.	.	5,118	2,559
Zinc (Fume or Dust)[M]	2	67	5,600	892	29	.	6,588	3,294
Nitric Acid	2	0	.	.	5	.	5	3
Selenium[M]	2	2,271	.	.	.	.	2,271	1,136
Beryllium Compounds[C, M]	1	0	.	.	.	.	0	0
Diisocyanates	1	0	.	.	.	.	0	0
Mercury Compounds[M]	1	0	1	.	.	.	1	1
Selenium Compounds[M]	1	0	.	28	2	.	30	30
Silver Compounds[M]	1	0	0	.	.	.	0	0
Chloroform[C]	1	0	.	.	1	.	1	1
Acetaldehyde[C]	1	0	.	.	.	.	0	0
Ethylene Oxide[C]	1	0	.	.	.	.	0	0
Ethylidene Dichloride	1	0	.	.	.	.	0	0
Propylene Oxide[C]	1	0	.	.	.	.	0	0
Trichlorofluoromethane[O]	1	0	.	.	.	.	0	0
Chlorotrifluoromethane	1	0	.	.	.	.	0	0
Isobutyraldehyde	1	0	.	.	.	.	0	0
1,2-dichloropropane	1	0	.	.	2	.	2	2
2,3-dichloropropene	1	0	.	.	510,840	.	510,840	510,840
Trichloroethylene[C]	1	0	.	.	.	.	0	0
Peracetic Acid	1	0	.	.	.	.	0	0
4,4'-isopropylidenediphenol	1	0	.	.	75,000	380,000	455,000	455,000
Quinoline	1	0	.	.	.	.	0	0
1,2,3-trichloropropane[C]	1	0	.	.	10,017,000	.	10,017,000	10,017,000
Acetophenone	1	0	.	.	.	.	0	0
2,4-Dimethylphenol	1	6,157	.	27,655	.	.	33,812	33,812
P-cresol	1	0	.	1	.	.	1	1
Epichlorohydrin[C]	1	0	.	.	811,315	400	811,715	811,715
Allyl Chloride	1	0	.	.	370,600	.	370,600	370,600
Allyl Alcohol	1	0	.	.	.	.	0	0
M-cresol	1	0	.	1	.	.	1	1
1,3-phenylenediamine	1	0	.	.	.	.	0	0
Chlorobenzene	1	0	.	.	.	.	0	0
2-ethoxyethanol	1	0	.	.	.	.	0	0
Pyridine	1	0	.	.	410	.	410	410
Butyraldehyde	1	0	.	.	.	.	0	0
Ethyl Acrylate[C]	1	0	.	.	.	.	0	0
Hydrazine[C]	1	0	.	.	.	.	0	0
Polychlorinated Biphenyls[C]	1	0	.	.	0	.	0	0
Beryllium[C, M]	1	0	.	.	.	.	0	0
Cadmium[C, M]	1	0	.	.	.	.	0	0
Sodium Nitrite	1	0	.	.	.	.	0	0
Fluorine	1	0	.	.	.	.	0	0
	180**	4,931,184	3,166,765	5,911,632	13,534,028	1,657,935	29,201,545	162,231

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Petroleum Refining Facilities Reporting Only SIC 2911*		
Rank	Facility[1]	Total TRI Releases in Pounds
1	Mobil Oil Beaumont Refinery, Beaumont, Texas	3,339,526
2	Amoco Petroleum Prods., Texas City, Texas	2,668,452
3	Farmland Ind. Inc., Coffeyville, Kansas	2,303,176
4	Fina Oil & Chemical, Big Spring, Texas	2,056,685
5	Lion Oil Co., El Dorado, Arkansas	1,595,262
6	Basis Petroleum Inc., Houston, Texas	886,324
7	Hess Oil Virgin Islands Corp., Kingshill, Virgin Islands	169,071
8	Lyondell-citgo Refining Co., Houston, Texas	1,394,202
9	Diamond Shamrock Inc., Sunray, Texas	1,138,037
10	Coastal Refining & Marketing, Corpus Christi, Texas	1,035,339

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 2911 or SIC 2911 and Other SIC Codes*			
Rank	Facility[1]	SIC Codes Reported in TRI	Total TRI Releases in Pounds
1	Shell Oil Co., Deer Park, Texas	2821, 2865, 2869, 2911, 2992	4,513,517
2	Mobil Oil Beaumont Refinery, Beaumont, Texas	2911	3,339,526
3	Exxon Co. USA, Baton Rouge, Louisiana	2911, 5171	2,995,273
4	Amoco Petroleum Prods., Texas City, Texas	2911	2,668,452
5	Citgo Petroleum Corp., Lake Charles, Louisiana	2819, 2869, 2911	2,552,445
6	Shell Norco Refining Co., Norco, Louisiana	2869, 2911	2,422,358
7	Phillips 66 Co., Borger, Texas	2819, 2911	2,405,278
8	Farmland Ind. Inc., Coffeyville, Kansas	2911	2,303,176
9	Chevron Prods. Co., Pasagoula, Mississippi	2869, 2873, 2911	2,235,259
10	Fina Oil & Chemical, Big Spring, Texas	2911	2,056,685

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Petroleum Refining (SIC 2911) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	1,705	12%	16%	55%	25%	0%	0%	1%	4%
1995	1,449	7%	18%	43%	33%	0%	0%	1%	6%
1996	1,310	---	19%	38%	35%	0%	0%	1%	6%
1997	1,314	---	19%	39%	35%	0%	0%	1%	6%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Petroleum Refining Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	0	0	0	--	0	0	0%	0%	--
II	10	10	289	2	10	103	62%	38%	0.36
III	10	10	344	2	8	64	67%	33%	0.19
IV	13	12	181	4	7	19	42%	58%	0.10
V	16	16	402	2	13	59	56%	44%	0.15
VI	53	48	943	3	44	216	66%	34%	0.23
VII	5	5	140	2	4	19	5%	95%	0.14
VIII	15	14	371	2	12	62	76%	24%	0.17
IX	25	24	282	5	20	201	84%	16%	0.71
X	9	9	129	4	6	20	55%	45%	0.16
TOTAL	156	148	3,081	3	124	763	68%	32%	0.25

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Rubber and Plastic

1995 TRI Releases for Rubber and Miscellaneous Plastics Facilities (SIC 30) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Styrene[C]	581	4,871,703	13,953,846	508	0	26,247	18,852,304	32,448
Zinc Compounds[M]	387	77,764	83,627	16,514	0	80,681	258,586	668
Toluene	274	5,020,268	11,770,610	913	1	18,500	16,810,292	61,351
Methyl Ethyl Ketone	244	4,096,697	8,045,051	36	5	52,793	12,194,582	49,978
Dichloromethane[C]	199	9,632,532	16,045,951	353	0	6	25,678,842	129,039
Diisocyanates	176	18,180	16,745	0	0	12,338	47,263	269
Di(2-ethylhexyl) Phthalate[C]	155	126,752	195,528	95	0	122,416	444,791	2,870
Xylene (Mixed Isomers)	136	454,814	4,382,364	45	0	0	4,837,223	35,568
Antimony Compounds[M]	126	8,694	10,074	515	0	752	20,035	159
Methanol	94	690,624	8,173,824	10,725	0	1,233	8,876,406	94,430
Methyl Isobutyl Ketone	90	454,757	1,901,515	7	0	189	2,356,468	26,183
1,1,1-Trichloroethane[O]	86	2,689,175	3,888,260	1	0	35,965	6,613,401	76,900
Lead Compounds[C, M]	80	7,230	6,785	567	0	765	15,347	192
Toluene Diisocyanate (Mixed Isomers)[C]	79	7,150	19,184	100	0	250	26,684	338
Certain Glycol Ethers	76	98,739	1,634,664	37	0	750	1,734,190	22,818
Chromium Compounds[C, M]	61	2,516	3,293	286	0	510	6,605	108
1,1-dichloro-1-fluoroethane[O]	60	1,321,709	893,596	0	0	35,762	2,251,067	37,518
Barium Compounds[M]	45	1,958	4,352	56	0	8,355	14,721	327
Thiram	45	887	864	50	0	0	1,801	40
N-hexane	43	1,658,596	2,057,021	544	0	0	3,716,161	86,422
Methyl Methacrylate	41	119,507	618,752	155	0	0	738,414	18,010
Phenol	40	64,743	861,047	634	0	0	926,424	23,161
Formaldehyde[C]	39	28,638	137,409	364	0	0	166,411	4,267
N-butyl Alcohol	39	63,469	765,734	280	0	0	829,483	21,269
Trichloroethylene[C]	39	969,194	484,465	5	0	0	1,453,664	37,273
Decabromodiphenyl Oxide	39	1,799	3,066	273	0	3,405	8,543	219
Ethylene Glycol	38	153,510	100,794	5,119	0	0	259,423	6,827
Ethylbenzene	37	14,546	453,549	266	0	0	468,361	12,658
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	35	125,227	210,112	5	0	0	335,344	9,581
Phosphoric Acid	33	1,543	6,140	0	4	0	7,687	233
Chlorodifluoromethane[O]	32	260,465	25,705	0	0	0	286,170	8,943
Ammonia	31	273,173	516,460	19,114	0	116	808,863	26,092
Cobalt Compounds[C, M]	28	290	624	1,030	0	0	1,944	69
Sulfuric Acid	27	4,555	7,003,799	5	5	0	7,008,364	259,569
Nitric Acid	27	6,933	17,868	0	0	0	24,801	919
Chlorine	27	13,497	13,273	503	0	0	27,273	1,010
Toluene-2,4-Diisocyanate[C]	26	1,661	2,368	0	0	0	4,029	155
Diethanolamine	24	2,531	3,880	0	0	0	6,411	267
Copper[M]	24	282	1,198	0	0	5	1,485	62
Nickel Compounds[C, M]	22	600	1,757	1,568	0	250	4,175	190
Lead[C, M]	22	1,065	9,418	85	0	0	10,568	480
Copper Compounds[M]	20	525	41	685	0	0	1,251	63
Manganese Compounds[M]	20	543	1,752	61	0	255	2,611	131
N,N-dimethylformamide[C]	19	131,726	636,427	358	0	5	768,516	40,448
Toluene-2,6-diisocyanate[C]	19	676	1,915	0	0	0	2,591	136
Dimethyl Phthalate	19	1,484	7,504	2	0	0	8,990	473
Chromium[M]	19	25	146	0	0	2,111	2,282	120
Dibutyl Phthalate	18	343	18,365	146	0	0	18,854	1,047
Tetrachloroethylene[C]	18	53,253	307,771	0	0	0	361,024	20,057
2-mercaptobenzothiazole	16	186	4,816	5	0	260	5,267	329
N-methyl-2-pyrrolidone	16	16,395	53,758	0	0	5	70,158	4,385
Nickel[C, M]	16	375	330	6	0	250	961	60
Zinc (Fume or Dust)[M]	15	815	3,444	755	0	38,459	43,473	2,898
1-chloro-1,1-difluoroethane[O]	14	407,466	4,557,307	1	0	0	4,964,774	354,627
Cyclohexane	14	522,147	529,647	178	0	0	1,051,972	75,141
Antimony[M]	14	1,110	91	110	0	9,144	10,455	747
Phthalic Anhydride	13	604	2,753	0	0	0	3,357	258
1,2,4-trimethylbenzene	12	32,945	532,152	0	0	0	565,097	47,091
Nitrate Compounds	11	250	19,330	148,638	0	0	168,218	15,293
Vinyl Acetate[C]	11	17,676	87,885	0	0	0	105,561	9,596

1995 TRI Releases for Rubber and Miscellaneous Plastics Facilities (SIC 30) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Cadmium Compounds[C, M]	10	765	1,160	3	0	0	1,928	193
Polycyclic Aromatic Compounds[C]	10	250	250	0	0	250	750	75
Propylene Oxide[C]	10	27,946	61,248	250	0	250	89,694	8,969
Ethylene Thiourea[C]	9	0	515	0	0	0	515	57
Chloroethane	8	1,138,860	1,002,810	1	0	0	2,141,671	267,709
Carbon Disulfide	8	354,483	11,718,082	263	0	0	12,072,828	1,509,104
Freon 113[O]	8	78,932	66,703	2,914	0	0	148,549	18,569
Acrylic Acid	8	1,784	1,188	0	0	0	2,972	372
Benzoyl Peroxide	8	0	623	0	0	0	623	78
Cumene	8	261	20,263	0	0	0	20,524	2,566
4,4'-methylenebis(2-chloroaniline)[C]	8	250	10	0	0	0	260	33
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	7	25,915	35,282	0	0	0	61,197	8,742
4,4'-isopropylidenediphenol	7	231	732	0	0	0	963	138
Acetaldehyde[C]	6	80,138	128,511	916	0	0	209,565	34,928
Maleic Anhydride	6	250	875	0	0	0	1,125	188
Ethyl Acrylate[C]	6	4,900	1,856	15	0	0	6,771	1,129
Barium[M]	6	10	1,425	0	0	0	1,435	239
Ethylene Oxide[C]	5	35,270	10,794	250	0	5	46,319	9,264
Trichlorofluoromethane[O]	5	39,271	48,565	0	0	0	87,836	17,567
1,3-butadiene[C]	5	10,972	1,635	0	0	0	12,607	2,521
Acrylonitrile[C]	5	451	599	7	0	5	1,062	212
Chloroprene	5	5	5	0	0	5,104	5,114	1,023
Manganese[M]	5	31	48	0	0	0	79	16
Sodium Nitrite	5	250	22,600	250	0	35,000	58,100	11,620
Ozone	5	39,860	186,417	0	0	0	226,277	45,255
Vinyl Chloride[C]	4	12,900	76,951	1	0	0	89,852	22,463
Dichlorodifluoromethane[O]	4	11,078	6	0	0	0	11,084	2,771
Sec-butyl Alcohol	4	2,662	35,168	5	0	5	37,840	9,460
Cumene Hydroperoxide	4	12,194	1,289	0	0	0	13,483	3,371
4,4'-methylenedianiline[C]	4	500	146	0	0	0	646	162
1,4-Dioxane[C]	4	689	2,072	2,896	0	22	5,679	1,420
Butyl Acrylate	4	5,940	1,152	0	0	0	7,092	1,773
Cobalt[C, M]	4	0	16	0	0	0	16	4
Formic Acid	3	1,513	96	8	0	0	1,617	539
Vinylidene Chloride	3	305	5,424	1	0	0	5,730	1,910
Naphthalene	3	3,562	109,331	0	0	0	112,893	37,631
Methyl Acrylate	3	3,100	1,484	0	0	0	4,584	1,528
2-methoxyethanol	3	204	300,664	0	0	0	300,868	100,289
Propylene	3	13,650	3,536	0	0	0	17,186	5,729
Butyraldehyde	3	14,000	20,200	437	0	0	34,637	11,546
Aluminum (Fume or Dust)[M]	3	0	15	0	0	0	15	5
Hydrogen Fluoride	3	4,880	29,220	0	0	0	34,100	11,367
Arsenic Compounds[C, M]	2	0	0	0	0	0	0	0
Cyanide Compounds	2	5	0	0	0	0	5	3
Chloroform[C]	2	21,818	40,908	5	0	0	62,731	31,366
Ethylene	2	60,935	40,021	0	0	0	100,956	50,478
Chloromethane	2	89,686	15,000	0	0	0	104,686	52,343
Acetonitrile	2	6,243	430	0	0	0	6,673	3,337
Tert-butyl Alcohol	2	255	263	0	0	0	518	259
Dicyclopentadiene	2	29	111	0	0	0	140	70
Epichlorohydrin[C]	2	931	316	2	0	3	1,252	626
M-xylene	2	0	700	0	0	12,500	13,200	6,600
2-ethoxyethanol	2	3,680	12,400	1	0	0	16,081	8,041
Triethylamine	2	860	14,586	0	0	0	15,446	7,723
Diphenylamine	2	250	395	0	0	0	645	323
Hydroquinone	2	6	0	0	0	0	6	3
Methyl Isocyanate	2	0	0	0	0	0	0	0
Cresol (Mixed Isomers)	2	5,200	15,004	0	0	0	20,204	10,102
Aluminum Oxide (Fibrous Forms)[M]	2	115	184	0	0	0	299	150
Cadmium[C, M]	2	5	0	0	0	250	255	128

1995 TRI Releases for Rubber and Miscellaneous Plastics Facilities (SIC 30) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Polychlorinated Alkanes	1	0	0	0	0	0	0	0
Selenium Compounds[M]	1	0	0	0	0	0	0	0
Piperonyl Butoxide	1	0	0	0	0	0	0	0
Nitroglycerin	1	9	0	0	0	0	9	9
N-nitrosomorpholine[C]	1	0	0	0	0	0	0	0
Benzene[C]	1	12,896	0	0	0	0	12,896	12,896
Hydrogen Cyanide	1	890	74,000	0	0	0	74,890	74,890
Phosgene	1	3	15	0	0	0	18	18
Acrylamide[C]	1	0	399	0	0	0	399	399
2-nitropropane	1	12,000	0	0	0	0	12,000	12,000
Michler's Ketone[C]	1	0	1,577	0	0	0	1,577	1,577
Biphenyl	1	10,900	2,500	13	0	0	13,413	13,413
O-Toluidine[C]	1	5	5	5	0	5	20	20
4,4'-methylenebis(N,N-dimethyl) benzenamine[C]	1	0	5	0	0	0	5	5
1,4-Dichlorobenzene[C]	1	358	57	0	0	0	415	415
1,2-butylene Oxide	1	0	5	0	0	0	5	5
1,2-Dibromoethane[C]	1	230	3	9	0	0	242	242
Allyl Chloride	1	45	230	49	0	0	324	324
Allyl Alcohol	1	266	7,301	0	0	0	7,567	7,567
Chlorobenzene	1	1,120	10,076	0	0	0	11,196	11,196
Propoxur	1	0	5	0	0	0	5	5
Catechol	1	5	250	0	0	0	255	255
Dimethylamine	1	970	0	0	0	0	970	970
2,2-dichloro-1,1,1-trifluoroethane[O]	1	14	34,800	0	0	0	34,814	34,814
Asbestos (Friable)[C]	1	0	0	0	0	0	0	0
Polychlorinated Biphenyls[C]	1	0	0	0	0	0	0	0
Sulfuryl Fluoride	1	0	355,000	0	0	0	355,000	355,000
Silver[M]	1	0	5	0	0	0	5	5
Arsenic[C, M]	1	0	0	0	0	0	0	0
Tetramethrin	1	0	0	0	0	0	0	0
Phosphorus (Yellow or White)	1	0	0	0	0	0	0	0
Diaminotoluene (Mixed Isomers)[C]	1	5	5	250	0	5	265	265
Sodium Azide	1	0	0	0	0	0	0	0
Permethrin	1	0	0	0	0	0	0	0
Trade Secret Chemical	1	250	5	0	0	0	255	255
	1,947**	36,780,783	105,628,293	220,254	15	505,181	143,134,526	73,515

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Rubber and Miscellaneous Plastics Facilities (SIC 30) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Styrene[C]	581	878	2,656,160	361,306	1,952,309	886,520	5,857,923	10,082
Zinc Compounds[M]	387	85,823	5,668,386	1,880,509	349,907	62,110	8,049,555	20,800
Toluene	274	3,788	53,374	624,063	607,463	3,450,271	4,741,459	17,305
Methyl Ethyl Ketone	244	17,517	17,042	2,775,910	902,542	3,961,166	7,676,677	31,462
Dichloromethane[C]	199	255	11,635	1,423,390	269,846	278,002	1,983,128	9,965
Diisocyanates	176	265	192,912	92,133	71,802	39,760	396,872	2,255
Di(2-ethylhexyl) Phthalate[C]	155	9,795	1,534,989	2,540,542	75,925	161,628	4,322,879	27,890
Xylene (Mixed Isomers)	136	37	35	494,245	369,392	1,204,574	2,068,533	15,210
Antimony Compounds[M]	126	1,831	409,643	85,247	22,847	2,597	522,165	4,144
Methanol	94	936,389	2,030	437,747	293,135	1,334,750	3,005,806	31,977
Methyl Isobutyl Ketone	90	109	2,093	155,322	54,606	819,743	1,031,873	11,465
1,1,1-Trichloroethane[O]	86	5	1,971	212,703	24,139	103,996	342,814	3,986
Lead Compounds[C, M]	80	1,863	103,348	1,290,190	28,415	681	1,424,497	17,806
Toluene Diisocyanate (Mixed Isomers)[C]	79	0	8,014	12,480	123,070	25,380	168,944	2,139
Certain Glycol Ethers	76	74,932	108,328	111,634	317,460	628,095	1,240,449	16,322
Chromium Compounds[C, M]	61	1,145	147,551	340,797	57,329	0	546,822	8,964
1,1-dichloro-1-fluoroethane[O]	60	250	94,782	9,402	6,820	2,703	113,957	1,899
Barium Compounds[M]	45	536	98,968	15,984	6,573	40,206	162,267	3,606
Thiram	45	632	90,455	30,543	4,780	5	126,415	2,809
N-hexane	43	5	14,900	.	37,300	59,272	111,477	2,592
Methyl Methacrylate	41	4,916	194,145	.	150,938	348,247	698,246	17,030
Phenol	40	661	187,520	.	61,818	45,793	298,292	7,457
Formaldehyde[C]	39	1,266,552	11,790	181	18,323	27,265	1,324,111	33,952
N-butyl Alcohol	39	650,000	250	33,257	28,103	95,485	807,850	20,714
Trichloroethylene[C]	39	514	.	238,388	68,137	74,891	381,930	9,793
Decabromodiphenyl Oxide	39	607	311,538	32,216	43,495	5,973	393,829	10,098
Ethylene Glycol	38	57,501	9,642	33,417,361	54,281	167,958	33,706,743	887,020
Ethylbenzene	37	259	.	82,550	542,286	147,361	772,456	20,877
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	35	450	6	.	865	.	1,321	38
Phosphoric Acid	33	10,060	30,554	.	42,138	3,792	119,544	3,623
Chlorodifluoromethane[O]	32	0	7,087	.	.	.	7,087	221
Ammonia	31	78,050	2,955	20,181	2,640	5,270	109,096	3,519
Cobalt Compounds[C, M]	28	22	51,159	4,878	2,805	.	58,864	2,102
Sulfuric Acid	27	250	.	77,800	.	.	78,050	2,891
Nitric Acid	27	518	.	50,773	1,052	.	52,343	1,939
Chlorine	27	6,080	.	.	.	.	6,080	225
Toluene-2,4-Diisocyanate[C]	26	0	611	1,400	7,620	10,183	19,814	762
Diethanolamine	24	4,894	409	.	10,276	360	15,939	664
Copper[M]	24	327	7,580	7,085,987	280	1	7,094,175	295,591
Nickel Compounds[C, M]	22	1,690	20,288	388,488	80,318	0	490,784	22,308
Lead[C, M]	22	335	114,003	1,664,211	38,713	1,600	1,818,862	82,676
Copper Compounds[M]	20	1,431	81,873	1,249,771	96,378	.	1,429,458	71,473
Manganese Compounds[M]	20	510	4,538	28,674	.	.	33,722	1,686
N,N-dimethylformamide[C]	19	869,076	336	46,786	38,127	290,578	1,245,403	65,548
Toluene-2,6-diisocyanate[C]	19	0	153	.	1,135	745	2,033	107
Dimethyl Phthalate	19	270	2,369	800	.	2,695	6,134	323
Chromium[M]	19	23	103,986	400,721	111	.	504,841	26,571
Dibutyl Phthalate	18	99	19,267	22,049	19,032	5,192	65,639	3,647
Tetrachloroethylene[C]	18	5	5	64,838	35,902	3,230	103,980	5,777
2-mercaptobenzothiazole	16	7,855	213,423	104,825	0	.	326,103	20,381
N-methyl-2-pyrrolidone	16	153,439	255	29,469	59,693	29,203	272,059	17,004
Nickel[C, M]	16	317	9,652	172,161	255	600	182,985	11,437
Zinc (Fume or Dust)[M]	15	827	148,472	5,160	44,159	.	198,618	13,241
1-chloro-1,1-difluoroethane[O]	14	0	.	.	.	.	0	0
Cyclohexane	14	1,500	89,706	311,070	280,720	79,074	762,070	54,434
Antimony[M]	14	22	14,522	13,550	1,622	1,500	31,216	2,230
Phthalic Anhydride	13	5	15,331	1,009	8,503	1,463	26,311	2,024
1,2,4-trimethylbenzene	12	250	.	15,911	1,390	14,190	31,741	2,645
Nitrate Compounds	11	2,277,082	.	3	752	.	2,277,837	207,076

1995 TRI Transfers for Rubber and Miscellaneous Plastics Facilities (SIC 30) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Vinyl Acetate[C]	11	10,500	2,425	8,456	70,212	1,577	93,170	8,470
Cadmium Compounds[C, M]	10	765	1,988	3,025	257	.	6,035	604
Polycyclic Aromatic Compounds[C]	10	1,700	134,824	80,850	.	1,420	218,794	21,879
Propylene Oxide[C]	10	5,800	160	.	28,565	415	34,940	3,494
Ethylene Thiourea[C]	9	5	16,165	840	6,280	.	23,290	2,588
Chloroethane	8	0	.	.	.	.	0	0
Carbon Disulfide	8	325,362	.	.	.	.	325,362	40,670
Freon 113[O]	8	0	.	5,165	12,719	.	17,884	2,236
Acrylic Acid	8	980	.	.	79,746	168,555	249,281	31,160
Benzoyl Peroxide	8	0	3,150	.	.	250	3,400	425
Cumene	8	5	5,637	.	62,825	18,059	86,526	10,816
4,4'-methylenebis(2-chloroaniline)[C]	8	5	5	.	6,724	1,783	8,517	1,065
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	7	0	.	.	.	29,813	29,813	4,259
4,4'-isopropylidenediphenol	7	0	614	.	950	.	1,564	223
Acetaldehyde[C]	6	3,300	.	.	83,471	106	86,877	14,480
Maleic Anhydride	6	0	2,074	.	5,938	.	8,012	1,335
Ethyl Acrylate[C]	6	3,680	.	.	1,543	14,435	19,658	3,276
Barium[M]	6	5	3,674	3,550	.	3	7,232	1,205
Ethylene Oxide[C]	5	250	160	.	.	.	410	82
Trichlorofluoromethane[O]	5	0	.	.	.	.	0	0
1,3-butadiene[C]	5	0	2,857	.	85,867	420	89,144	17,829
Acrylonitrile[C]	5	24	250	.	36,980	11,500	48,754	9,751
Chloroprene	5	0	7,102	.	.	.	7,102	1,420
Manganese[M]	5	0	7,470	23,195	.	.	30,665	6,133
Sodium Nitrite	5	27,510	750	.	2,005	.	30,265	6,053
Ozone	5	0	.	.	.	.	0	0
Vinyl Chloride[C]	4	226	16	.	2,200	.	2,442	611
Dichlorodifluoromethane[O]	4	0	.	.	.	.	0	0
Sec-butyl Alcohol	4	63	.	.	.	2,448	2,511	628
Cumene Hydroperoxide	4	0	59,003	.	.	.	59,003	14,751
4,4'-methylenedianiline[C]	4	0	.	.	3,400	1,800	5,200	1,300
1,4-Dioxane[C]	4	78,935	1,583	.	12,655	13,969	107,142	26,786
Butyl Acrylate	4	94,000	200	.	11,216	15,622	121,038	30,260
Cobalt[C, M]	4	0	2,312	9,398	.	.	11,710	2,928
Formic Acid	3	410	.	.	.	.	410	137
Vinylidene Chloride	3	0	1	.	29,500	.	29,501	9,834
Naphthalene	3	0	.	.	.	13,234	13,234	4,411
Methyl Acrylate	3	4,000	.	.	1,331	3,675	9,006	3,002
2-methoxyethanol	3	48,389	35	.	1,819	4,143	54,386	18,129
Propylene	3	0	.	.	.	.	0	0
Butyraldehyde	3	150,440	41	.	12,200	.	162,681	54,227
Aluminum (Fume or Dust)[M]	3	0	.	250	.	.	250	83
Hydrogen Fluoride	3	0	.	.	9,740	.	9,740	3,247
Arsenic Compounds[C, M]	2	0	.	6,174	15	.	6,189	3,095
Cyanide Compounds	2	5	.	.	3,061	.	3,066	1,533
Chloroform[C]	2	0	.	.	2,536	.	2,536	1,268
Ethylene	2	0	.	.	.	.	0	0
Chloromethane	2	250	.	.	486	.	736	368
Acetonitrile	2	0	.	1,080	27,900	42,600	71,580	35,790
Tert-butyl Alcohol	2	0	.	.	59,849	128,558	188,407	94,204
Dicyclopentadiene	2	0	.	.	1,700	18,700	20,400	10,200
Epichlorohydrin[C]	2	0	.	.	42	.	42	21
M-xylene	2	0	.	.	12,500	.	12,500	6,250
2-ethoxyethanol	2	0	.	.	.	4,790	4,790	2,395
Triethylamine	2	0	.	.	18	.	18	9
Diphenylamine	2	750	10,560	9,600	.	250	21,160	10,580
Hydroquinone	2	0	.	.	.	.	0	0
Methyl Isocyanate	2	0	.	.	.	.	0	0
Cresol (Mixed Isomers)	2	1	.	.	1,831	4,300	6,132	3,066

1995 TRI Transfers for Rubber and Miscellaneous Plastics Facilities (SIC 30) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Aluminum Oxide (Fibrous Forms)[M]	2	0	.	.	.	4,596	4,596	2,298
Cadmium[C, M]	2	0	.	250	3,911	.	4,161	2,081
Polychlorinated Alkanes	1	0	.	11,128	.	.	11,128	11,128
Selenium Compounds[M]	1	0	.	11,765	10	.	11,775	11,775
Piperonyl Butoxide	1	250	.	.	15,148	.	15,398	15,398
Nitroglycerin	1	203	.	.	3	.	206	206
N-nitrosomorpholine[C]	1	0	.	.	.	.	0	0
Benzene[C]	1	0	.	.	3,535	30,234	33,769	33,769
Hydrogen Cyanide	1	0	.	.	.	.	0	0
Phosgene	1	0	.	.	.	.	0	0
Acrylamide[C]	1	0	.	.	.	55	55	55
2-nitropropane	1	0	.	.	.	59	59	59
Michler's Ketone[C]	1	0	.	.	.	436	436	436
Biphenyl	1	0	.	.	1,360	.	1,360	1,360
O-Toluidine[C]	1	120	.	.	.	200	320	320
4,4'-methylenebis(N,N-dimethyl) benzenamine[C]	1	0	.	.	.	.	0	0
1,4-Dichlorobenzene[C]	1	0	.	.	.	.	0	0
1,2-butylene Oxide	1	0	.	.	.	27	27	27
1,2-Dibromoethane[C]	1	0	.	.	50	0	50	50
Allyl Chloride	1	0	.	.	.	.	0	0
Allyl Alcohol	1	191,310	.	.	68,967	.	260,277	260,277
Chlorobenzene	1	0	.	.	.	.	0	0
Propoxur	1	250	.	.	750	.	1,000	1,000
Catechol	1	15,000	.	.	.	.	15,000	15,000
Dimethylamine	1	0	.	.	.	.	0	0
2,2-dichloro-1,1,1-trifluoroethane[O]	1	0	.	.	1,196	.	1,196	1,196
Asbestos (Friable)[C]	1	0	223,376	.	.	.	223,376	223,376
Polychlorinated Biphenyls[C]	1	0	.	.	250	.	250	250
Sulfuryl Fluoride	1	0	.	.	.	.	0	0
Silver[M]	1	0	.	.	.	1	1	1
Arsenic[C, M]	1	0	712	.	.	.	712	712
Tetramethrin	1	0	.	.	750	.	750	750
Phosphorus (Yellow or White)	1	0	.	.	.	.	0	0
Diaminotoluene (Mixed Isomers)[C]	1	250	.	.	110	990	1,350	1,350
Sodium Azide	1	0	.	.	.	.	0	0
Permethrin	1	0	.	.	505	.	505	505
Trade Secret Chemical	1	0	.	.	.	.	0	0
	1,947**	7,497,195	13,357,185	58,633,341	8,092,153	14,963,131	102,590,340	52,691

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Rubber and Plastic Facilities Reporting Only SIC 30*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	Westinghouse Electric Corp., Hampton, South Carolina	5,172,390
2	Devro-Teepak Inc., Danville, Illinois	3,876,076
3	3M, Guin, Alabama	2,471,008
4	Goodyear Tire & Rubber Co., Lincoln, Nebraska	2,327,372
5	Viskase Corp., Loudon, Tennessee	2,278,000
6	O'Sullivan Corp., Winchester, Virginia	2,133,232
7	Flexel Indiana Inc., Covington, Indina	1,900,265
8	Foamex Intl. Inc., Orange, California	1,628,510
9	Texas Recreation Corp., Wichita Falls, Texas	1,592,500
10	Viskase Corp., Bedford Park, Illinois	1,551,050

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 30 or SIC 30 and Other SIC Codes*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	Westinghouse Electric Corp., Hampton, South Carolina	3083	5,172,390
2	Devro-Teepak Inc., Danville, Illinois	3089	3,876,076
3	3M, Guin, Alabama	3081	2,471,008
4	Goodyear Tire & Rubber Co., Lincoln, Nebraska	3052	2,327,372
5	Viskase Corp., Loudon, Tennessee	3089	2,278,000
6	O'Sullivan Corp., Winchester, Virginia	3081, 3083	2,133,232
7	Flexel Indiana Inc., Covington, Indiana	3089	1,900,265
8	Dow Chemical Co., Pevely, Missouri	2821, 3086	1,769,591
9	Foamex Intl. Inc., Orange, California	3086	1,628,510
10	Texas Recreation Corp., Wichita Falls, Texas	3086	1,592,500

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Rubber and Miscellaneous Plastic Facilities (SICs 30) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	778	29%	50%	6%	11%	8%	2%	2%	22%
1995	864	28%	54%	7%	10%	7%	2%	2%	19%
1996	773	---	51%	8%	11%	8%	2%	2%	18%
1997	657	---	43%	9%	12%	10%	2%	2%	21%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Rubber and Plastic Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	91	55	188	29	15	26	65%	35%	0.14
II	87	60	333	16	20	52	88%	12%	0.16
III	162	103	616	16	15	25	65%	35%	0.04
IV	424	243	1,377	18	43	63	94%	6%	0.05
V	585	298	1,072	33	45	54	80%	20%	0.05
VI	179	62	244	44	10	17	94%	6%	0.07
VII	109	79	300	22	18	24	75%	25%	0.08
VIII	27	19	56	29	3	5	100%	0%	0.09
IX	116	39	122	57	2	3	67%	33%	0.02
X	38	23	75	30	7	7	71%	29%	0.09
TOTAL	1,818	981	4,383	25	178	276	82%	18%	0.06

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Stone, Clay, Glass and Concrete

1995 TRI Releases for Stone, Clay, Glass and Concrete Facilities (SIC 32) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Chromium Compounds[C, M]	106	19,122	18,989	1,333	0	146,319	185,763	1,752
Ammonia	71	387,911	7,309,839	364,164	0	106,027	8,167,941	115,041
Barium Compounds[M]	70	5,181	21,124	768	0	32,130	59,203	846
Manganese Compounds[M]	70	19,963	27,640	2,183	0	95,773	145,559	2,079
Zinc Compounds[M]	69	39,375	61,179	39,804	0	207,993	348,351	5,049
Toluene	61	342,617	1,605,339	291	0	3,970	1,952,217	32,004
Lead Compounds[C, M]	59	24,784	114,044	4,297	0	123,025	266,150	4,511
Formaldehyde[C]	59	175,581	2,015,608	946	0	73,410	2,265,545	38,399
Hydrogen Fluoride	55	4,838	3,352,577	255	0	0	3,357,670	61,049
Phenol	54	72,954	1,117,625	3,092	0	8,936	1,202,607	22,271
Methyl Ethyl Ketone	52	707,624	819,576	284	0	0	1,527,484	29,375
Xylene (Mixed Isomers)	51	339,585	789,797	798	0	0	1,130,180	22,160
Methanol	49	121,852	1,078,655	7,434	0	34,800	1,242,741	25,362
Styrene[C]	48	168,571	757,168	59	0	0	925,798	19,287
Hydrochloric Acid (1995 and after "Acid	48	23,629	15,581,651	470	102,063	17,000	15,724,813	327,600
Chromium[M]	45	85,081	2,881	74	0	31,501	119,537	2,656
Manganese[M]	44	18,956	4,144	16	0	192,692	215,808	4,905
Ethylene Glycol	40	1,851	31,907	20,229	0	38,317	92,304	2,308
Phosphoric Acid	37	20,619	6,838	3,348	0	30,888	61,693	1,667
Ethylbenzene	28	43,869	87,090	761	0	0	131,720	4,704
Lead[C, M]	27	2,540	41,798	496	0	122,884	167,718	6,212
Methyl Isobutyl Ketone	26	5,810	49,946	0	0	0	55,756	2,144
Antimony Compounds[M]	24	2,818	9,077	1,175	0	1,483	14,553	606
Dichloromethane[C]	24	179,872	74,529	330	0	0	254,731	10,614
Nickel[C, M]	24	1,729	1,021	52	0	4,015	6,817	284
Sulfuric Acid	24	2,335	446,493	0	0	0	448,828	18,701
Copper[M]	19	46,914	10,718	786	0	80	58,498	3,079
Nickel Compounds[C, M]	18	2,073	2,525	3,261	0	1,950	9,809	545
Tetrachloroethylene[C]	18	39,485	57,628	1	0	0	97,114	5,395
Certain Glycol Ethers	17	5,430	155,127	0	0	0	160,557	9,445
1,1,1-Trichloroethane[O]	17	221,841	497,143	0	0	0	718,984	42,293
N-butyl Alcohol	16	20,306	142,709	530	0	0	163,545	10,222
Aluminum (Fume or Dust)[M]	15	3,692	1,002	0	0	500	5,194	346
Barium[M]	15	10	19,917	260	0	0	20,187	1,346
Nitric Acid	15	37,496	27,261	0	0	0	64,757	4,317
Copper Compounds[M]	13	6,223	1,305	1,325	0	3,701	12,554	966
Trichloroethylene[C]	11	79,231	170,050	0	0	0	249,281	22,662
Benzene[C]	10	1,158	8,436	0	0	0	9,594	959
1,2,4-trimethylbenzene	10	10,177	92,570	250	0	0	102,997	10,300
Zinc (Fume or Dust)[M]	10	3,274	9,189	10	0	250	12,723	1,272
Chlorine	10	668	195,390	441	190	0	196,689	19,669
Cobalt Compounds[C, M]	9	59	4,194	1,892	0	0	6,145	683
Diisocyanates	9	0	14	0	0	0	14	2
Cadmium Compounds[C, M]	8	19	260	73	0	1,020	1,372	172
Naphthalene	8	307	75,975	0	0	5	76,287	9,536
Di(2-ethylhexyl) Phthalate[C]	8	20	30,170	0	0	0	30,190	3,774
Cyclohexane	7	19,848	150,691	170	0	0	170,709	24,387
Chloroform[C]	6	298	30,997	5	0	0	31,300	5,217
Dibutyl Phthalate	6	47	20,094	0	0	1,402	21,543	3,591
N-hexane	6	14,276	11,900	544	0	0	26,720	4,453
Cobalt[C, M]	6	0	250	0	0	0	250	42
Nitrate Compounds	5	1	8	471,636	0	3,018	474,663	94,933
Methyl Methacrylate	5	2,784	8,045	150	0	0	10,979	2,196
2-ethoxyethanol	5	13,293	34,602	1	0	0	47,896	9,579
Diethanolamine	5	1,000	13,002	0	0	0	14,002	2,800
Triethylamine	5	33,030	109,991	0	0	0	143,021	28,604
Aluminum Oxide (Fibrous Forms)[M]	5	750	250	2,280	0	250	3,530	706
Arsenic Compounds[C, M]	4	265	9,843	62	0	0	10,170	2,543
N,N-dimethylformamide[C]	4	557	39,025	108	0	0	39,690	9,923
Cumene	4	266	300	0	0	0	566	142
Chlorobenzene	4	12	19	0	0	0	31	8
Pyridine	4	51	321	0	0	0	372	93
Decabromodiphenyl Oxide	4	0	250	1,463	0	1,639	3,352	838
Cresol (Mixed Isomers)	4	511	829	0	0	0	1,340	335

1995 TRI Releases for Stone, Clay, Glass and Concrete Facilities (SIC 32) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Antimony[M]	4	6	4,277	8	0	0	4,291	1,073
Carbon Tetrachloride[C, O]	3	7	23	0	0	0	30	10
Tert-butyl Alcohol	3	761	8,545	0	0	0	9,306	3,102
Phenanthrene	3	255	163	0	0	0	418	139
Phthalic Anhydride	3	500	570	0	0	0	1,070	357
Nitrobenzene	3	14	73	0	0	0	87	29
1,4-Dichlorobenzene[C]	3	500	29,744	0	0	0	30,244	10,081
1,2-Dichloroethane[C]	3	12	26	0	0	0	38	13
Carbonyl Sulfide	3	0	383,163	0	0	0	383,163	127,721
Asbestos (Friable)[C]	3	1	616	0	0	0	617	206
Creosote[C]	3	16	18	0	0	0	34	11
Toluene Diisocyanate (Mixed Isomers)[C]	3	469	8	0	0	0	477	159
Cyanide Compounds	2	5	0	2,821	0	10,257	13,083	6,542
Polycyclic Aromatic Compounds[C]	2	0	5	0	0	1,700	1,705	853
Selenium Compounds[M]	2	998	19,965	15	0	0	20,978	10,489
Formic Acid	2	313	96	8	0	0	417	209
Isopropyl Alcohol (Manufacturing,	2	404	254	0	0	0	658	329
Sec-butyl Alcohol	2	2,600	1,170	0	0	0	3,770	1,885
O-xylene	2	426	761	0	0	0	1,187	594
1,2-Dichlorobenzene	2	5	5	0	0	0	10	5
Acetophenone	2	10	255	0	0	0	265	133
P-cresol	2	10	10	0	0	0	20	10
Vinyl Acetate[C]	2	250	250	0	0	0	500	250
Maleic Anhydride	2	250	287	0	0	0	537	269
M-xylene	2	0	1,000	0	0	0	1,000	500
Anthracene	2	250	5	0	0	0	255	128
Dimethyl Phthalate	2	5	0	0	0	0	5	3
Molybdenum Trioxide	2	990	12	36,000	0	0	37,002	18,501
Dichlorobenzene (Mixed Isomers)[C]	2	10	22	0	0	0	32	16
Polychlorinated Alkanes	1	0	0	0	0	0	0	0
Silver Compounds[M]	1	0	160	0	0	0	160	160
Vinyl Chloride[C]	1	0	4	0	0	0	4	4
Acetonitrile	1	250	250	0	0	0	500	500
Carbon Disulfide	1	5	5	0	0	0	10	10
Chlorodifluoromethane[O]	1	5	5	0	0	0	10	10
Trichlorofluoromethane[O]	1	36	237	0	0	0	273	273
Dichlorodifluoromethane[O]	1	5	3	0	0	0	8	8
Freon 113[O]	1	5	5	0	0	0	10	10
Dicyclopentadiene	1	250	250	0	0	0	500	500
1,1,2-trichloroethane	1	2	14	0	0	0	16	16
Acrylamide[C]	1	5	250	0	0	0	255	255
Acrylic Acid	1	126	471	0	0	0	597	597
1,1,2,2-tetrachloroethane	1	2	14	0	0	0	16	16
2-nitropropane	1	250	5	0	0	0	255	255
4,4'-isopropylidenediphenol	1	0	270	0	0	0	270	270
2-phenylphenol	1	0	0	0	0	0	0	0
Biphenyl	1	5	5	0	0	0	10	10
Methyl Acrylate	1	2,090	850	0	0	0	2,940	2,940
4,4'-methylenedianiline[C]	1	0	5	0	0	0	5	5
2,4-Dimethylphenol	1	1	1	0	0	0	2	2
P-xylene	1	0	250	0	0	0	250	250
1,3-butadiene[C]	1	0	2,185	0	0	0	2,185	2,185
Acrolein	1	5	1	0	0	0	6	6
Allyl Chloride	1	45	230	49	0	0	324	324
Propargyl Alcohol	1	471	482	0	0	0	953	953
M-cresol	1	5	5	0	0	0	10	10
2-methoxyethanol	1	5,100	249,900	0	0	5	255,005	255,005
Propylene	1	5	0	0	0	0	5	5
1,4-Dioxane[C]	1	250	250	0	0	0	500	500
Dibenzofuran	1	0	0	0	0	0	0	0
Ethyl Acrylate[C]	1	3,530	558	10	0	0	4,098	4,098
Butyl Acrylate	1	0	250	0	0	0	250	250
Calcium Cyanamide	1	0	5	0	0	0	5	5
2,2-dichloro-1,1,1-trifluoroethane[O]	1	14	34,800	0	0	0	34,814	34,814

1995 TRI Releases for Stone, Clay, Glass and Concrete Facilities (SIC 32) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Lithium Carbonate	1	0	1	0	0	0	1	1
Polychlorinated Biphenyls[C]	1	0	0	0	0	0	0	0
Methyl Tert-butyl Ether	1	5	5	0	0	0	10	10
1,1-dichloro-1-fluoroethane[O]	1	250	750	0	0	0	1,000	1,000
Fluometuron	1	5	5	0	0	0	10	10
Arsenic[C, M]	1	750	250	0	0	2,600	3,600	3,600
Cadmium[C, M]	1	0	3	0	0	0	3	3
Selenium[M]	1	0	1,430	5	0	0	1,435	1,435
	623**	3,440,830	38,111,712	976,823	102,253	1,299,540	43,931,158	70,516

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Stone,Clay, Glass and Concrete Facilities (SIC 32) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg Transfer Per Facility
Chromium Compounds[C, M]	106	2,352	938,214	960,168	13,434	1,125	1,915,293	18,069
Ammonia	71	145,620	32,764	2,500	419	150	181,453	2,556
Barium Compounds[M]	70	154,444	895,163	290,271	175,074	.	1,514,952	21,642
Manganese Compounds[M]	70	23,870	649,677	725,013	2,360	250	1,401,420	20,020
Zinc Compounds[M]	69	34,139	870,758	1,268,718	26,977	177	2,200,769	31,895
Toluene	61	0	3,625	268,368	229,818	1,261,271	1,763,082	28,903
Lead Compounds[C, M]	59	2,163	2,454,121	1,025,209	160,582	10,207	3,652,282	61,903
Formaldehyde[C]	59	92,448	33,186	498	36,783	15,077	177,992	3,017
Hydrogen Fluoride	55	329,152	10	47,746	163,902	.	540,810	9,833
Phenol	54	17,837	70,644	772	70,629	34,972	194,854	3,608
Methyl Ethyl Ketone	52	2,808	.	217,317	113,293	1,344,319	1,677,737	32,264
Xylene (Mixed Isomers)	51	8,400	392	241,016	170,151	617,521	1,037,480	20,343
Methanol	49	37,928	12,594	105,275	66,145	446,571	668,513	13,643
Styrene[C]	48	0	501	2,316	26,053	24,125	52,995	1,104
Hydrochloric Acid (1995 and after "Acid	48	2,415	.	.	41,761	.	44,176	920
Chromium[M]	45	0	85,233	165,413	101,971	45,500	398,117	8,847
Manganese[M]	44	16	266,065	54,109	603,494	.	923,684	20,993
Ethylene Glycol	40	504	9,784	7,654	36,602	10,105	64,649	1,616
Phosphoric Acid	37	155	38,917	.	.	.	39,072	1,056
Ethylbenzene	28	0	.	30,975	40,249	77,565	148,789	5,314
Lead[C, M]	27	284	34,155	434,891	533,186	1,332	1,003,848	37,180
Methyl Isobutyl Ketone	26	0	.	1,728	31,634	170,364	203,726	7,836
Antimony Compounds[M]	24	1,031	118,707	6,969	572	.	127,279	5,303
Dichloromethane[C]	24	5	.	250	35,437	7,616	43,308	1,805
Nickel[C, M]	24	605	42,635	218,769	9,478	500	271,987	11,333
Sulfuric Acid	24	25,816	.	.	.	.	25,816	1,076
Copper[M]	19	121	22,656	1,926,528	33,755	.	1,983,060	104,372
Nickel Compounds[C, M]	18	515	42,622	54,117	1,955	.	99,209	5,512
Tetrachloroethylene[C]	18	0	.	21,190	12,774	23,285	57,249	3,181
Certain Glycol Ethers	17	917	40	1,555	18,890	98,967	120,369	7,081
1,1,1-Trichloroethane[O]	17	5	860	107,270	11,073	12,473	131,681	7,746
N-butyl Alcohol	16	0	.	12,488	20,738	63,295	96,521	6,033
Aluminum (Fume or Dust)[M]	15	0	2,615	6,332	103,142	.	112,089	7,473
Barium[M]	15	505	13,332	46,991	31,316	.	92,144	6,143
Nitric Acid	15	500	7,345	127,388	314,010	.	449,243	29,950
Copper Compounds[M]	13	255	17,385	1,308,584	1,450	750	1,328,424	102,186
Trichloroethylene[C]	11	0	.	96,059	11,611	10,861	118,531	10,776
Benzene[C]	10	0	.	.	609	13,588	14,197	1,420
1,2,4-trimethylbenzene	10	0	.	350	11,721	9,293	21,364	2,136
Zinc (Fume or Dust)[M]	10	1,539	73,366	224,598	3,010,158	.	3,309,661	330,966
Chlorine	10	7,300	.	.	.	.	7,300	730
Cobalt Compounds[C, M]	9	277	33,907	41,273	2,688	.	78,145	8,683
Diisocyanates	9	0	.	3,450	20,519	500	24,469	2,719
Cadmium Compounds[C, M]	8	274	71,555	973	4,530	.	77,332	9,667
Naphthalene	8	5	1,500	.	18,673	5,966	26,144	3,268
Di(2-ethylhexyl) Phthalate[C]	8	256	5	2,400	9,300	.	11,961	1,495
Cyclohexane	7	0	.	230	8,427	17,427	26,084	3,726
Chloroform[C]	6	0	.	.	8,955	36,992	45,947	7,658
Dibutyl Phthalate	6	0	1,402	.	15,023	4,726	21,151	3,525
N-hexane	6	0	.	25	19,103	14,809	33,937	5,656
Cobalt[C, M]	6	5	270	79,474	8,041	.	87,790	14,632
Nitrate Compounds	5	1,874,818	.	3	2	.	1,874,823	374,965
Methyl Methacrylate	5	0	.	.	.	1,148	1,148	230
2-ethoxyethanol	5	1,055	.	1,715	18,778	70,914	92,462	18,492
Diethanolamine	5	312	.	.	.	269	581	116
Triethylamine	5	8,700	.	.	.	.	8,700	1,740
Aluminum Oxide (Fibrous Forms)[M]	5	500	22,234	.	.	.	22,734	4,547
Arsenic Compounds[C, M]	4	21	189,837	1,984	1	.	191,843	47,961
N,N-dimethylformamide[C]	4	250	.	250	978	8,845	10,323	2,581
Cumene	4	0	.	.	1,444	477	1,921	480
Chlorobenzene	4	0	.	.	2,245	6,953	9,198	2,300
Pyridine	4	0	.	.	15,950	11,476	27,426	6,857
Decabromodiphenyl Oxide	4	0	250	.	2,350	4,390	6,990	1,748
Cresol (Mixed Isomers)	4	0	675	.	6,914	7,570	15,159	3,790

1995 TRI Transfers for Stone,Clay, Glass and Concrete Facilities (SIC 32) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg Transfer Per Facility
Antimony[M]	4	0	.	975	.	.	975	244
Carbon Tetrachloride[C, O]	3	0	.	.	2,800	7,223	10,023	3,341
Tert-butyl Alcohol	3	0	.	2,000	1,444	727	4,171	1,390
Phenanthrene	3	0	.	.	.	.	0	0
Phthalic Anhydride	3	0	.	250	.	1,000	1,250	417
Nitrobenzene	3	0	.	.	10,000	9,443	19,443	6,481
1,4-Dichlorobenzene[C]	3	0	.	.	.	6,333	6,333	2,111
1,2-Dichloroethane[C]	3	0	.	.	777	6,600	7,377	2,459
Carbonyl Sulfide	3	0	.	.	.	.	0	0
Asbestos (Friable)[C]	3	2	274,300	.	.	.	274,302	91,434
Creosote[C]	3	0	250	.	.	.	250	83
Toluene Diisocyanate (Mixed Isomers)[C]	3	0	.	.	.	.	0	0
Cyanide Compounds	2	250	250	.	13,000	.	13,500	6,750
Polycyclic Aromatic Compounds[C]	2	0	250	.	.	.	250	125
Selenium Compounds[M]	2	3	79	77	7,793	14	7,966	3,983
Formic Acid	2	0	.	.	.	.	0	0
Isopropyl Alcohol (Manufacturing,	2	0	.	.	178	5,400	5,578	2,789
Sec-butyl Alcohol	2	0	.	.	1,400	.	1,400	700
O-xylene	2	0	.	250	493	1,925	2,668	1,334
1,2-Dichlorobenzene	2	0	.	.	.	.	0	0
Acetophenone	2	0	.	.	.	10	10	5
P-cresol	2	0	.	.	.	.	0	0
Vinyl Acetate[C]	2	0	.	.	.	5,893	5,893	2,947
Maleic Anhydride	2	0	38	.	500	.	538	269
M-xylene	2	0	.	250	.	1,000	1,250	625
Anthracene	2	0	.	.	.	.	0	0
Dimethyl Phthalate	2	0	.	.	.	.	0	0
Molybdenum Trioxide	2	0	68,896	.	.	.	68,896	34,448
Dichlorobenzene (Mixed Isomers)[C]	2	0	.	.	2,984	5,175	8,159	4,080
Polychlorinated Alkanes	1	9,892	.	.	.	.	9,892	9,892
Silver Compounds[M]	1	0	.	42,600	.	.	42,600	42,600
Vinyl Chloride[C]	1	0	.	.	.	6,333	6,333	6,333
Acetonitrile	1	0	.	.	.	.	0	0
Carbon Disulfide	1	0	.	.	.	10	10	10
Chlorodifluoromethane[O]	1	0	.	.	.	10	10	10
Trichlorofluoromethane[O]	1	0	.	.	8,673	2,866	11,539	11,539
Dichlorodifluoromethane[O]	1	0	.	.	1,304	.	1,304	1,304
Freon 113[O]	1	0	.	.	.	10	10	10
Dicyclopentadiene	1	0	.	.	.	.	0	0
1,1,2-trichloroethane	1	0	.	.	2,500	800	3,300	3,300
Acrylamide[C]	1	0	.	.	.	.	0	0
Acrylic Acid	1	0	.	.	.	2,800	2,800	2,800
1,1,2,2-tetrachloroethane	1	0	.	.	2,800	880	3,680	3,680
2-Nitropropane[C]	1	0	.	.	.	255	255	255
4,4'-isopropylidenediphenol	1	0	.	.	.	.	0	0
2-phenylphenol	1	745	.	.	.	.	745	745
Biphenyl	1	0	.	.	.	.	0	0
Methyl Acrylate	1	0	.	.	.	295	295	295
4,4'-methylenedianiline[C]	1	0	.	.	18,000	.	18,000	18,000
2,4-Dimethylphenol	1	0	.	.	980	5,133	6,113	6,113
P-xylene	1	0	.	250	.	500	750	750
1,3-butadiene[C]	1	0	.	.	.	.	0	0
Acrolein	1	0	.	.	258	.	258	258
Allyl Chloride	1	0	.	.	.	.	0	0
Propargyl Alcohol	1	0	.	.	746	3,633	4,379	4,379
M-cresol	1	0	.	.	.	.	0	0
2-methoxyethanol	1	0	.	.	.	.	0	0
Propylene	1	0	.	.	.	.	0	0
1,4-Dioxane[C]	1	0	.	.	.	.	0	0
Dibenzofuran	1	0	.	.	.	.	0	0
Ethyl Acrylate[C]	1	0	.	.	.	295	295	295
Butyl Acrylate	1	0	.	.	.	.	0	0
Calcium Cyanamide	1	0	.	.	.	.	0	0
2,2-dichloro-1,1,1-trifluoroethane[O]	1	0	.	.	1,196	.	1,196	1,196

1995 TRI Transfers for Stone,Clay, Glass and Concrete Facilities (SIC 32) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery	Total Transfers	Avg Transfer Per Facility
Lithium Carbonate	1	0	76	.	.	.	76	76
Polychlorinated Biphenyls[C]	1	0	.	.	27,271	.	27,271	27,271
Methyl Tert-butyl Ether	1	0	.	.	.	.	0	0
1,1-dichloro-1-fluoroethane[O]	1	0	2,915	.	.	.	2,915	2,915
Fluometuron	1	0	.	.	.	.	0	0
Arsenic[C, M]	1	0	.	.	.	2,650	2,650	2,650
Cadmium[C, M]	1	0	.	.	.	633	633	633
Selenium[M]	1	0	5	4,604	.	.	4,609	4,609
	623**	2,791,014	7,406,060	10,192,428	6,821,220	4,571,567	31,782,539	51,015

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Stone, Clay, Glass and Concrete Facilities Reporting Only SIC 32*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	Owens-Corning, Newark, Ohio	1,894,747
2	Corning Inc., Canton, New York	1,198,250
3	Owens Corning, Aiken, South Carolina	634,250
4	Owens Corning, Amarillo, Texas	603,380
5	Certainteed Corp., Mountain Top, Pennsylvania	587,062
6	Schuller Intl. Inc., Winder, Georgia	583,048
7	Schuller Intl. Inc., Defiance, Ohio	560,334
8	Owens-corning, Waxahachie, Texas	532,661
9	Schuller Intl. Inc., Mc Pherson, Kansas	495,305
10	Owens-Corning, Fairburn, Georgia	484,752

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 32 or SIC 32 and Other SIC Codes*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	Lafarge Corp., Alpena, Michigan	3241, 4953	2,676,262
2	Owens-Corning, Newark, Ohio	3296	1,894,747
3	Corning Inc., Canton, New York	3229	1,198,250
4	Harman Automotive Inc., Bolivar, Tennessee	3714, 3231	1,100,391
5	3M, White City, Oregon	3861, 3291, 2672	751,400
6	Owens Corning, Aiken, South Carolina	3229	634,250
7	Owens Corning, Amarillo, Texas	3229	603,380
8	Osram Sylvania Inc., Towanda, Pennsylvania	3339, 3341, 2819, 2816, 3496, 3297	593,656
9	Ferodo America, Smithville, Tenessee	3292, 3714	591,085
10	Engelhard Corp., Savannah, Georgia	3295, 2819	588,841

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Stone,Clay,Glass and Concrete Products Facilities (SIC 32) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	1,018	6%	11%	68%	16%	1%	1%	0%	4%
1995	988	8%	15%	62%	15%	1%	0%	1%	6%
1996	1,012	---	15%	61%	16%	1%	0%	1%	5%
1997	1,054	---	15%	63%	15%	1%	0%	1%	5%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity.*

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Stone, Clay, Glass and Concrete Industry*

A	B	C	D	E	F	G	H	I	J
Region	Facilities In Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	14	9	23	37	2	5	40%	60%	0.22
II	40	26	350	7	11	35	94%	6%	0.10
III	83	59	661	8	18	64	92%	8%	0.10
IV	136	100	889	9	25	57	70%	30%	0.06
V	151	88	749	12	12	36	50%	50%	0.05
VI	76	42	243	19	6	15	87%	13%	0.06
VII	33	25	288	7	13	33	39%	61%	0.11
VIII	22	13	76	17	4	5	100%	0%	0.07
IX	47	21	164	17	6	27	96%	4%	0.16
X	13	5	31	25	0	0	0%	0%	--
TOTAL	615	388	3,474	11	97	277	75%	25%	0.08

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Iron and Steel

1995 TRI Releases for Iron and Steel Facilities (SIC 331) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Zinc Compounds[M]	124	815,939	1,040,835	234,021	250	20,582,148	22,673,193	182,848
Chromium Compounds[C, M]	122	46,814	196,927	37,954	0	2,233,111	2,514,806	20,613
Manganese Compounds[M]	119	374,353	1,803,613	392,851	3,000	27,900,531	30,474,348	256,087
Chromium[M]	119	25,381	55,931	6,666	0	508,968	596,946	5,016
Nickel[C, M]	104	20,036	68,611	7,523	0	156,482	252,652	2,429
Manganese[M]	101	36,050	40,086	11,814	0	790,523	878,473	8,698
Nickel Compounds[C, M]	91	10,117	25,156	17,457	0	262,937	315,667	3,469
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	90	481,418	1,656,840	5	0	5	2,138,268	23,759
Nitric Acid	72	34,536	512,142	32	0	29,000	575,710	7,996
Lead Compounds[C, M]	69	70,337	180,618	26,175	0	1,207,312	1,484,442	21,514
Lead[C, M]	64	17,378	50,723	3,593	0	89,000	160,694	2,511
Copper[M]	60	4,663	5,655	5,797	0	53,800	69,915	1,165
Ammonia	60	8,596,982	1,276,314	818,748	0	152,984	10,845,028	180,750
Phosphoric Acid	55	27,127	8,502	3,105	0	82,433	121,167	2,203
Copper Compounds[M]	54	19,465	259,792	12,867	0	334,654	626,778	11,607
Sulfuric Acid	52	204,099	104,260	0	0	0	308,359	5,930
Hydrogen Fluoride	45	82,447	424,848	29	0	14,000	521,324	11,585
Zinc (Fume or Dust)[M]	39	246,418	199,446	7,304	0	2,100	455,268	11,674
Toluene	32	205,742	367,514	670	0	712	574,638	17,957
Xylene (Mixed Isomers)	30	141,018	226,862	1,805	0	7	369,692	12,323
Ethylene	25	322,401	1,118,097	0	0	0	1,440,498	57,620
Molybdenum Trioxide	25	9,454	4,092	8,322	0	23,748	45,616	1,825
Benzene[C]	24	379,176	322,248	3,138	0	557	705,119	29,380
Naphthalene	24	250,536	12,088	1,883	0	403	264,910	11,038
Aluminum (Fume or Dust)[M]	24	18,093	33,639	18,308	0	2,094	72,134	3,006
Cyanide Compounds	23	130,941	151,159	61,124	0	13,527	356,751	15,511
Barium Compounds[M]	18	1,206	1,459	11,030	0	49,094	62,789	3,488
Trichloroethylene[C]	18	784,808	575,836	260	0	0	1,360,904	75,606
Ethylene Glycol	17	30,968	255	103,463	0	4,401	139,087	8,182
Phenol	17	674,060	12,136	20,018	0	6,555	712,769	41,928
Chlorine	17	16,169	21,024	1,190	190	0	38,573	2,269
Polycyclic Aromatic Compounds[C]	16	4,085	642	43	0	2	4,772	298
Cobalt[C, M]	15	2,177	2,102	326	0	9,967	14,572	971
Methanol	13	524,568	5,958	0	0	111	530,637	40,818
Propylene	13	21,511	105,650	0	0	0	127,161	9,782
Anthracene	13	10,364	42,786	505	0	0	53,655	4,127
Nitrate Compounds	12	0	0	5,706,855	0	48,000	5,754,855	479,571
1,1,1-Trichloroethane[O]	12	291,754	142,510	0	0	0	434,264	36,189
Ethylbenzene	11	6,706	3,425	750	0	0	10,881	989
Dibenzofuran	11	2,230	27	5	0	0	2,262	206
Cadmium Compounds[C, M]	10	679	517	4	0	0	1,200	120
Styrene[C]	10	2,533	150	0	0	0	2,683	268
Certain Glycol Ethers	9	105,031	302,153	18,000	0	0	425,184	47,243
Methyl Ethyl Ketone	9	523,394	264,237	0	0	0	787,631	87,515
Antimony Compounds[M]	7	606	2,217	6,197	0	3,671	12,691	1,813
1,2,4-trimethylbenzene	7	26,678	11,521	0	0	1	38,200	5,457
Sodium Nitrite	7	16,960	250	45,400	0	0	62,610	8,944
Biphenyl	6	540	0	0	0	0	540	90
Cresol (Mixed Isomers)	6	2,831	597	10	0	0	3,438	573
Dichloromethane[C]	5	276,496	424,193	0	0	0	700,689	140,138
Vanadium (Fume or Dust)[M]	5	355	2,924	0	0	30,632	33,911	6,782
Hydrogen Cyanide	4	2,055	430	0	0	0	2,485	621
Sec-butyl Alcohol	4	18,187	62,503	0	0	0	80,690	20,173
Quinoline	4	280	0	0	0	0	280	70
Tetrachloroethylene[C]	4	134,305	65,866	0	0	0	200,171	50,043
Cadmium[C, M]	4	8	250	0	0	170	428	107
Cobalt Compounds[C, M]	3	75	388	9	0	2,250	2,722	907
N-butyl Alcohol	3	2,657	55,179	0	0	0	57,836	19,279
Carbon Disulfide	3	2,650	1,410	0	0	0	4,060	1,353
Phenanthrene	3	18,000	0	0	0	200	18,200	6,067

1995 TRI Releases for Iron and Steel Facilities (SIC 331) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Calcium Cyanamide	3	0	5	0	0	0	5	2
Pyridine	2	4,030	0	0	0	0	4,030	2,015
Diethanolamine	2	730	0	57,000	0	0	57,730	28,865
Barium[M]	2	382	638	3,637	0	77,121	81,778	40,889
Arsenic Compounds[C, M]	1	6	3,800	0	0	3,200	7,006	7,006
Thiourea[C]	1	250	0	340	0	0	590	590
Acetonitrile	1	0	0	0	0	0	0	0
Methyl Isobutyl Ketone	1	160	0	0	0	0	160	160
2-methylpyridine	1	600	0	0	0	0	600	600
N-methyl-2-pyrrolidone	1	0	7,913	0	0	0	7,913	7,913
Asbestos (Friable)[C]	1	0	0	0	0	0	0	0
Polychlorinated Biphenyls[C]	1	0	0	0	0	0	0	0
Aluminum Oxide (Fibrous Forms)[M]	1	250	0	0	0	0	250	250
Antimony[M]	1	20	616	425	0	1,500	2,561	2,561
Arsenic[C, M]	1	40	40	0	0	0	80	80
Beryllium[C, M]	1	2	1	0	0	940	943	943
Phosphorus (Yellow or White)	1	5	15	0	0	3,900	3,920	3,920
Chlorine Dioxide	1	5	0	5	0	0	10	10
	423**	16,082,327	12,267,621	7,656,663	3,440	54,682,751	90,692,802	214,404

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Iron and Steel Facilities (SIC 331) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Zinc Compounds[M]	124	22,768	45,043,648	161,076,355	1,947,577	.	208,090,348	1,678,148
Chromium Compounds[C, M]	122	2,844	5,264,939	12,648,224	1,711,870	4,593	19,665,420	161,192
Manganese Compounds[M]	119	8,836	5,013,032	35,123,503	1,520,361	.	42,185,802	354,503
Chromium[M]	119	3,597	1,111,505	26,689,081	1,887,120	0	29,691,303	249,507
Nickel[C, M]	104	3,610	600,523	14,674,853	58,207	.	15,337,193	147,473
Manganese[M]	101	3,340	1,268,224	17,562,708	1,061,194	.	19,896,216	196,992
Nickel Compounds[C, M]	91	3,514	2,618,530	4,637,685	157,595	.	7,417,324	81,509
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	90	1,358,466	2,397,609	20,556,576	2,918,806	.	27,231,457	302,572
Nitric Acid	72	561	3,936,995	11,608	5,389,291	.	9,338,455	129,701
Lead Compounds[C, M]	69	2,005	1,746,567	19,811,212	228,350	.	23,045,894	333,998
Lead[C, M]	64	1,913	326,517	7,319,609	1,074,945	.	8,722,989	136,297
Copper[M]	60	1,494	132,762	2,885,947	116,973	.	3,137,176	52,286
Ammonia	60	153,290	286,013	17,600	34,505	2,400	493,808	8,230
Phosphoric Acid	55	29,335	69,240	138,584	64,424	.	301,583	5,483
Copper Compounds[M]	54	4,080	823,011	1,298,746	142,009	.	2,267,846	41,997
Sulfuric Acid	52	1,760	559,017	649,631	3,357,561	.	4,728,252	90,928
Hydrogen Fluoride	45	5,854	965,246	7,452	1,185,884	.	2,164,436	48,099
Zinc (Fume or Dust)[M]	39	3,017	810,586	66,851,862	5,411,809	5,594	73,082,868	1,873,920
Toluene	32	373	507	324	1,041	23,007	25,252	789
Xylene (Mixed Isomers)	30	312	470	9,112	8,506	11,787	30,187	1,006
Ethylene	25	0	.	.	2,100,000	.	2,100,000	84,000
Molybdenum Trioxide	25	805	4,724	170,785	2,200	.	178,514	7,141
Benzene[C]	24	1,251	961	8	3,304	1,400	6,924	289
Naphthalene	24	386	16,880	4	39,478	620	57,368	2,390
Aluminum (Fume or Dust)[M]	24	5	81,840	761,149	253,742	1,000	1,097,736	45,739
Cyanide Compounds	23	103,053	1,927	.	102,696	.	207,676	9,029
Barium Compounds[M]	18	0	356,518	23,564	1,350	.	381,432	21,191
Trichloroethylene[C]	18	2	10,343	302,113	37,934	13,110	363,502	20,195
Ethylene Glycol	17	1,850	9,455	371,538	46,690	4,800	434,333	25,549
Phenol	17	506,661	4,948	1	81,070	.	592,680	34,864
Chlorine	17	1,905	.	183,693	.	.	185,598	10,918
Polycyclic Aromatic Compounds[C]	16	0	2,900	8,400,000	268	.	8,403,168	525,198
Cobalt[C, M]	15	10	43,355	882,284	10	.	925,659	61,711
Methanol	13	0	.	55	.	.	55	4
Propylene	13	0	.	.	21,000	.	21,000	1,615
Anthracene	13	0	1,500	.	26	.	1,526	117
Nitrate Compounds	12	1,105,156	18,953	.	171,000	.	1,295,109	107,926
1,1,1-Trichloroethane[O]	12	1,871	.	104,674	.	8,072	114,617	9,551
Ethylbenzene	11	2	297	220	51	1,200	1,770	161
Dibenzofuran	11	0	1,100	.	40	.	1,140	104
Cadmium Compounds[C, M]	10	5	2,152	281,182	3,361	.	328,625	32,863
Styrene[C]	10	0	44	.	4	.	48	5
Certain Glycol Ethers	9	0	1,790	.	2,500	250	4,540	504
Methyl Ethyl Ketone	9	9	.	115,458	4,051	26,534	146,052	16,228
Antimony Compounds[M]	7	0	15,365	1	250	.	15,616	2,231
1,2,4-trimethylbenzene	7	0	83	.	.	7,822	7,905	1,129
Sodium Nitrite	7	0	148	53	.	.	201	29
Biphenyl	6	0	194	.	19	.	213	36
Cresol (Mixed Isomers)	6	5	.	.	22	.	27	5
Dichloromethane[C]	5	0	.	1,897	.	30,096	31,993	6,399
Vanadium (Fume or Dust)[M]	5	0	5	2,466	.	.	2,471	494
Hydrogen Cyanide	4	0	.	.	.	.	0	0
Sec-butyl Alcohol	4	0	500	.	.	750	1,250	313
Quinoline	4	0	165	.	8	.	173	43
Tetrachloroethylene[C]	4	0	.	38,339	.	6,160	44,499	11,125
Cadmium[C, M]	4	5	5,315	2,526	3,000	.	10,846	2,712
Cobalt Compounds[C, M]	3	0	4	57	1,390	.	1,451	484
N-butyl Alcohol	3	0	.	.	.	3,015	3,015	1,005
Carbon Disulfide	3	0	.	.	.	.	0	0

1995 TRI Transfers for Iron and Steel Facilities (SIC 331) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Phenanthrene	3	0	.	.	56	.	56	19
Calcium Cyanamide	3	0	.	.	.	.	0	0
Pyridine	2	0	.	.	.	.	0	0
Diethanolamine	2	0	.	.	.	.	0	0
Barium[M]	2	0	.	.	.	.	0	0
Arsenic Compounds[C, M]	1	0	.	9	1	.	10	10
Thiourea[C]	1	0	.	.	.	.	0	0
Acetonitrile	1	0	.	.	.	.	0	0
Methyl Isobutyl Ketone	1	0	.	.	.	.	0	0
2-methylpyridine	1	0	.	.	.	.	0	0
N-methyl-2-pyrrolidone	1	0	.	.	4,074	.	4,074	4,074
Asbestos (Friable)[C]	1	0	25,100	.	.	.	25,100	25,100
Polychlorinated Biphenyls[C]	1	0	8,238	.	33,313	.	41,551	41,551
Aluminum Oxide (Fibrous Forms)[M]	1	0	.	.	52,369	.	52,369	52,369
Antimony[M]	1	0	.	.	.	.	0	0
Arsenic[C, M]	1	0	.	.	.	.	0	0
Beryllium[C, M]	1	0	.	.	.	.	0	0
Phosphorus (Yellow or White)	1	0	.	.	.	.	0	0
Chlorine Dioxide	1	0	.	.	.	.	0	0
	423**	3,333,950	73,589,745	403,612,748	31,243,305	152,210	513,945,701	1,215,002

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Iron and Steel Facilities Reporting Only SIC 331*		
Rank	Facility[1]	Total TRI Releases in Pounds
1	Northwestern Steel & Wire Co., Sterling, Illinois	15,759,052
2	Elkem Metals Co., Marietta, Ohio	15,632,648
3	U.S. Steel, Gary, Indiana	11,675,262
4	Granite City Steel, Granite City, Illinois	5,381,750
5	USS Fairfield Works, Fairfield, Alabama	4,070,669
6	Armco Inc., Butler, Pennsylvania	2,886,971
7	LTV Steel Co. Inc., Cleveland, Ohio	2,594,790
8	Wheeling-Pittsburgh Steel Corp, Follansbee, Wyoming	1,718,575
9	J & L Specialty Steel Inc., Louisville, Ohio	1,420,979
10	Gulf States Steel Inc., Gadsen, Alabama	1,325,385

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting SIC 331 and Other SIC Codes*			
Rank	Facility[1]	SIC Codes Reported in TRI	Total TRI Releases in Pounds
1	Northwestern Steel & Wire Co., Sterling, IL	3312, 3315	15,759,052
2	Elkem Metals Co., Marietta, OH	3313	15,632,648
3	U.S. Steel, Gary, IN	3312	11,675,262
4	Granite City Steel, Granite City, IL	3,312	5,381,750
5	Kerr-McGee Chemical Corp., Hamilton, MS	2819, 3313	4,279,236
6	USS Fairfield Works, Fairfield, AL	3312	4,070,669
7	Armco Inc., Butler, PA	3312	2,886,971
8	LTV Steel Co. Inc., Cleveland, OH	3312, 3313, 3316	2,594,790
9	Wheeling-Pittsburgh Steel Corp, Follansbee, WV	3312	1,718,575
10	J & L Specialty Steel Inc., Louisville, OH	3312	1,420,979

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Iron and Steel Facilities (SIC 331) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	1,188	19%	33%	0%	18%	34%	0%	4%	12%
1995	1,239	49%	32%	0%	15%	35%	0%	6%	18%
1996	1,274	---	32%	0%	15%	36%	0%	5%	12%
1997	1,317	---	31%	0%	16%	35%	0%	6%	12%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Iron and Steel Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	11	8	34	19	4	6	67%	33%	0.18
II	19	13	174	7	9	32	88%	12%	0.18
III	70	62	1,633	3	27	84	80%	20%	0.05
IV	55	48	863	4	28	68	88%	12%	0.08
V	132	103	1,452	5	40	90	47%	53%	0.06
VI	33	21	160	12	8	14	50%	50%	0.09
VII	10	7	41	15	1	2	50%	50%	0.05
VIII	4	3	35	7	1	3	100%	0%	0.09
IX	11	6	36	18	2	4	100%	0%	0.11
X	4	4	48	5	1	2	100%	0%	0.04
TOTAL	349	275	4,476	5	121	305	71%	29%	0.07

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Metal Castings

TRI Releases for Foundries (SIC 332, 3365, 3366 and 3369) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg Releases Per Facility
Copper[M]	249	78,577	100,548	4,554	0	349,835	533,514	2,143
Nickel[C, M]	182	23,309	31,804	1,471	0	122,406	178,990	983
Chromium[M]	182	47,389	33,191	1,653	0	162,923	245,156	1,347
Manganese[M]	179	163,447	84,164	3,258	0	4,891,621	5,142,490	28,729
Phenol	89	219,560	421,803	4,490	0	53,891	699,744	51,996
Lead[C, M]	76	9,671	24,366	230	0	352,489	386,756	5,089
Diisocyanates	65	12,035	13,152	260	0	9,022	34,469	530
Manganese Compounds[M]	50	37,530	63,037	3,020	0	2,496,212	2,599,799	
Chromium Compounds[C, M]	45	41,903	70,489	1,529	0	779,154	893,075	19,846
Copper Compounds[M]	36	14,953	9,020	517	0	65,500	89,990	2,500
Zinc (Fume or Dust)[M]	35	71,228	144,470	2,104	0	1,696,554	1,914,356	54,696
Nickel Compounds[C, M]	32	12,241	7,188	512	0	724	20,665	646
Methanol	32	1,952,231	451,245	7	0	0	2,403,483	75,109
Zinc Compounds[M]	31	40,379	121,541	2,956	0	12,733,217	12,898,093	416,068
Aluminum (Fume or Dust)[M]	31	40,491	186,471	259	0	792,270	1,019,491	32,887
Triethylamine	30	235,144	1,143,297	5	0	5	1,378,451	45,948
Phosphoric Acid	26	157,071	578	10	0	86,093	243,752	9,375
Xylene (Mixed Isomers)	24	568,145	284,447	4	0	0	852,596	35,525
Cobalt[C, M]	24	1,450	1,832	501	0	5	3,788	158
Naphthalene	22	201,461	104,137	263	0	9,481	315,342	14,334
Molybdenum Trioxide	22	2,260	1,755	275	0	2,547	6,837	311
1,2,4-trimethylbenzene	18	188,854	54,393	1	0	32,850	276,098	15,339
Lead Compounds[C, M]	16	5,638	13,160	579	0	221,774	241,151	15,072
Formaldehyde[C]	16	75,414	78,441	245	0	11,436	165,536	10,346
Toluene	13	334,212	179,171	20	0	14	513,417	39,494
Barium[M]	13	34,486	3,691	135	0	141,150	179,462	13,805
Aluminum Oxide (Fibrous Forms)[M]	11	82,060	18,828	250	0	592,750	693,888	63,081
Certain Glycol Ethers	10	119,511	85,824	0	0	0	205,335	20,534
Sulfuric Acid	10	25,739	510	5	0	0	26,254	2,625
Nitric Acid	10	2,685	7,640	0	0	0	10,325	1,033
Ethylene Glycol	9	48,835	14,045	3	0	68,000	130,883	14,543
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	9	6	1,604	0	0	0	1,610	179
N-methyl-2-pyrrolidone	8	86,624	3,520	5	0	482	90,631	11,329
Ammonia	8	92,708	325,575	3,002	0	0	421,285	52,661
1,1,1-Trichloroethane[O]	7	182,997	61,382	0	0	0	244,379	34,911
Barium Compounds[M]	6	23,455	5	201	0	43,465	67,126	11,188
Cumene Hydroperoxide	6	2,000	1,300	0	0	3,400	6,700	1,117
Hydrogen Fluoride	6	1,250	1,130	0	0	0	2,380	397
Benzene[C]	5	3,150	239,000	7	0	36	242,193	48,439
Chlorine	5	8	5	615	0	0	628	126
Cobalt Compounds[C, M]	4	15	505	0	0	0	520	130
N-butyl Alcohol	4	33,272	250	0	0	0	33,522	8,381
4,4'-isopropylidenediphenol	4	750	0	0	0	0	750	188
Antimony[M]	4	260	260	0	0	0	520	130
Dichloromethane[C]	3	110,912	0	0	0	0	110,912	36,971
Methyl Ethyl Ketone	3	39,851	7,820	0	0	0	47,671	15,890
Trichloroethylene[C]	3	30,426	46,996	0	0	0	77,422	25,807
Styrene[C]	3	33,421	75,457	0	0	0	108,878	36,293
Tetrachloroethylene[C]	3	34,450	16,000	0	0	0	50,450	16,817
Cadmium[C, M]	3	5	6	0	0	0	11	4
Nitrate Compounds	2	1,700	0	23,000	0	0	24,700	12,350
Cumene	2	340	150	0	0	0	490	245
Ethylbenzene	2	4,610	18,439	0	0	0	23,049	11,525
Methyl Isobutyl Ketone	2	41,284	6,367	0	0	0	47,651	23,826
Arsenic[C, M]	2	250	250	0	0	0	500	250
Phosphorus (Yellow or White)	2	10	255	750	0	0	1,015	508
Antimony Compounds[M]	1	5	5	0	0	0	10	10
Beryllium Compounds[C, M]	1	0	0	0	0	0	0	0
Urethane[C]	1	0	0	0	0	0	0	0
Hexachloroethane	1	5	250	0	0	0	255	255
Diethanolamine	1	0	0	0	0	0	0	0
Propylene	1	0	0	0	0	0	0	0
Cresol (Mixed Isomers)	1	0	44,000	20	0	0	44,020	44,020
Polychlorinated Biphenyls[C]	1	0	0	0	0	0	0	0
1,1-dichloro-1-fluoroethane[O]	1	49,416	0	0	0	0	49,416	49,416
Selenium[M]	1	0	5	0	0	0	5	5
	554**	5,621,089	4,604,774	56,716	0	25,719,306	36,001,885	55,048

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Foundries (SIC 332, 3365, 3366 and 3369) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	POTW Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Copper[M]	249	3,386	926,053	12,948,705	49,688	1	13,927,833	55,935
Nickel[C, M]	182	5,811	752,487	2,925,158	23,193	1	3,706,650	20,366
Chromium[M]	182	3,568	947,383	2,042,419	14,667	5	3,008,047	16,528
Manganese[M]	179	2,598	6,528,832	2,834,670	59,838	0	9,425,938	52,659
Phenol	89	2,397	216,754	5,272	10,282	2,671	239,976	2,696
Lead[C, M]	76	1,566	78,229	828,352	22,767	1	930,915	12,249
Diisocyanates	65	5	110,292	55	40,449	2,510	153,561	2,362
Manganese Compounds[M]	50	4,553	5,800,216	6,143,043	152,468	0	12,100,280	242,006
Chromium Compounds[C, M]	45	17,857	4,274,721	5,249,563	1,475	0	9,543,616	212,080
Copper Compounds[M]	36	1,375	101,566	1,288,917	31,743	0	1,423,601	39,544
Zinc (Fume or Dust)[M]	35	861	592,866	1,420,309	85,916	0	2,099,952	59,999
Nickel Compounds[C, M]	32	2,093	101,546	1,463,377	8,969	0	1,575,985	49,250
Methanol	32	2	19,260	0	608	2,616	22,486	703
Zinc Compounds[M]	31	7,308	3,479,603	4,339,541	581,458	0	8,407,910	271,223
Aluminum (Fume or Dust)[M]	31	7,419	1,347,594	1,205,369	1,500	0	2,561,882	82,641
Triethylamine	30	5	250	423,423	228,606	0	652,284	21,743
Phosphoric Acid	26	255	228,515	49,474	8,576	0	286,820	11,032
Xylene (Mixed Isomers)	24	0	3,391	12,170	250	163,869	179,680	7,487
Cobalt[C, M]	24	1,574	21,956	618,986	7,719	0	650,235	27,093
Naphthalene	22	4	21,270	6,920	1,490	8,621	38,305	1,741
Molybdenum Trioxide	22	0	13,042	4,965	1,086	0	19,093	868
1,2,4-trimethylbenzene	18	1	21,671	6,463	260	7,922	36,317	2,018
Lead Compounds[C, M]	16	86	351,495	120,552	29,284	0	501,417	31,339
Formaldehyde[C]	16	3,845	44,078	430	3,530	0	51,883	3,243
Toluene	13	2	1,300	0	0	7,906	9,208	708
Barium[M]	13	294	121,356	70,525	6,830	0	199,255	15,327
Aluminum Oxide (Fibrous	11	0	651,926	17,405	0	0	669,331	60,848
Certain Glycol Ethers	10	0	6,550	13,000	255	0	19,805	1,981
Sulfuric Acid	10	600	15,162	0	12,850	0	28,612	2,861
Nitric Acid	10	250	0	22,772	35,331	0	58,353	5,835
Ethylene Glycol	9	38,810	53,800	17,368	0	0	109,978	12,220
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	9	5	0	0	76,000	0	76,005	8,445
N-methyl-2-pyrrolidone	8	2,435	26,470	13,000	4,902	1,933	48,740	6,093
Ammonia	8	13,195	0	40,250	0	0	53,445	6,681
1,1,1-Trichloroethane[O]	7	0	0	600	250	250	1,100	157
Barium Compounds[M]	6	0	170,228	245,735	250	0	416,213	69,369
Cumene Hydroperoxide	6	0	4,900	0	250	0	5,150	858
Hydrogen Fluoride	6	250	0	47,746	79,000	0	126,996	21,166
Benzene[C]	5	2	250	0	0	0	252	50
Chlorine	5	0	0	0	0	0	0	0
Cobalt Compounds[C, M]	4	0	5,869	394,655	0	0	400,524	100,131
N-butyl Alcohol	4	0	0	0	0	0	0	0
4,4'-isopropylidenediphenol	4	0	78,170	0	0	0	78,170	19,543
Antimony[M]	4	255	0	758	250	0	1,263	316
Dichloromethane[C]	3	0	28	0	0	0	28	9
Methyl Ethyl Ketone	3	0	0	6,458	250	10,822	17,530	5,843
Trichloroethylene[C]	3	0	0	1,350	0	2,000	3,350	1,117
Styrene[C]	3	0	0	0	0	355	355	118
Tetrachloroethylene[C]	3	0	0	250	0	0	250	83
Cadmium[C, M]	3	0	0	0	10	0	10	3
Nitrate Compounds	2	3,700	0	0	0	0	3,700	1,850
Cumene	2	0	400	0	250	0	650	325
Ethylbenzene	2	0	0	0	0	750	750	375
Methyl Isobutyl Ketone	2	0	0	0	53	0	53	27
Arsenic[C, M]	2	0	0	250	0	0	250	125
Phosphorus (Yellow or White)	2	5	19,532	15,043	0	0	34,580	17,290
Antimony Compounds[M]	1	0	0	0	0	0	0	0
Beryllium Compounds[C, M]	1	0	400	0	0	0	400	400
Urethane[C]	1	0	3,000	0	0	0	3,000	3,000
Hexachloroethane	1	0	0	0	0	0	0	0
Diethanolamine	1	1,300	0	0	2,400	0	3,700	3,700
Propylene	1	0	0	0	0	0	0	0
Cresol (Mixed Isomers)	1	6	0	0	0	0	6	6
Polychlorinated Biphenyls[C]	1	0	0	0	0	0	0	0
1,1-dichloro-1-fluoroethane[O]	1	0	0	0	0	0	0	0
Selenium[M]	1	0	5	0	0	0	5	5
	554**	127,678	27,142,416	44,845,298	1,584,953	212,233	73,915,683	113,021

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Releases for Die Casting Facilities (SIC 3363 and 3364) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Copper[M]	79	7,319	17,283	1,006	0	250	25,858	327
Nickel[C, M]	24	835	3,028	0	0	0	3,863	161
Aluminum (Fume or Dust)[M]	21	17,663	257,448	22	0	0	275,133	13,102
Zinc (Fume or Dust)[M]	10	6,747	19,842	0	0	0	26,589	2,659
Lead[C, M]	9	34	59	0	0	0	93	10
Manganese[M]	9	552	824	0	0	0	1,376	153
Zinc Compounds[M]	7	992	6,610	321	0	2,959	10,882	1,555
Chromium[M]	6	39	1,069	5	0	0	1,113	186
Copper Compounds[M]	3	84	1,853	0	0	0	1,937	646
Manganese Compounds[M]	3	0	0	250	0	0	250	83
Trichloroethylene[C]	3	12,689	101,545	0	0	0	114,234	38,078
Nitric Acid	3	250	1,000	0	0	0	1,250	417
Chlorine	3	255	1,705	0	0	0	1,960	653
Certain Glycol Ethers	2	4,800	5,600	0	0	0	10,400	5,200
Ethylene Glycol	2	0	0	0	0	0	0	0
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	2	500	0	0	0	0	500	250
Sulfuric Acid	2	250	750	0	0	0	1,000	500
Lead Compounds[C, M]	1	0	111	0	0	0	111	111
Nickel Compounds[C, M]	1	12	240	0	0	0	252	252
Hexachloroethane	1	1,146	10,316	0	0	0	11,462	11,462
Styrene[C]	1	1,450	0	0	0	0	1,450	1,450
Propylene	1	0	0	0	0	0	0	0
Triethylamine	1	250	5	0	0	0	255	255
Tetrachloroethylene[C]	1	5,800	23,200	.	0	0	29,000	29,000
Beryllium[C, M]	1	0	0	0	0	5	5	5
	100**	61,667	452,488	1,604	0	3,214	518,973	5,189

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

*Refer to Section III for a discussion of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Die Casting Facilities (SIC 3363 and 3364) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	POTW Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Copper[M]	79	363	34,284	4,683,629	851	.	4,719,127	59,736
Nickel[C, M]	24	45	2,623	166,911	35	.	169,614	7,067
Aluminum (Fume or Dust)[M]	21	265	233,319	4,852,664	5	.	5,086,253	242,203
Zinc (Fume or Dust)[M]	10	11	20,810	258,685	5	.	279,511	27,951
Lead[C, M]	9	20	515	10,443	10	.	10,988	1,221
Manganese[M]	9	10	776	5,997	.	.	6,783	754
Zinc Compounds[M]	7	303	5,259	488,477	6,955	.	500,994	71,571
Chromium[M]	6	15	760	750	15	.	1,540	257
Copper Compounds[M]	3	1	502	64,928	.	.	65,431	21,810
Manganese Compounds[M]	3	5	16,400	.	4,752	.	21,157	7,052
Trichloroethylene[C]	3	0	1,836	66,330	800	.	68,966	22,989
Nitric Acid	3	98	.	.	24,324	.	24,422	8,141
Chlorine	3	0	.	.	.	.	0	0
Certain Glycol Ethers	2	0	.	50,000	.	.	50,000	25,000
Ethylene Glycol	2	4	70	.	.	.	74	37
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	2	0	.	.	.	.	0	0
Sulfuric Acid	2	0	.	.	.	.	0	0
Lead Compounds[C, M]	1	0	360	1,500,000	.	.	1,500,360	1,500,360
Nickel Compounds[C, M]	1	0	54	7,767	.	.	7,821	7,821
Hexachloroethane	1	0	.	.	.	.	0	0
Styrene[C]	1	0	.	.	.	.	0	0
Propylene	1	0	.	.	.	.	0	0
Triethylamine	1	0	.	.	.	.	0	0
Tetrachloroethylene[C]	1	.	.	2,009	.	.	2,009	2,009
Beryllium[C, M]	1	0	.	750	.	.	750	750
	100**	1,140	317,568	12,159,340	37,752	0	12,515,800	125,158

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Metal Casting Facilities Reporting Only Foundry SIC Codes (332, 3365, 3366, 3369)*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	GM Powertrain Defiance - Defiance, OH	14,730,020
2	GMC Powertrain - Saginaw, MI	2,709,764
3	American Steel Foundries - Granite City, IL	1,245,343
4	Griffin Wheel Co. - Keokuk, IA	1,065,104
5	Griffin Wheel Co. - Groveport, OH	1,042,040
6	Griffin Wheel Co. - Bessemer, AL	742,135
7	U.S. Pipe & Foundry Co. - Birmingham, AL	738,200
8	American Steel Foundries - East Chicago, IN	625,191
9	Griffin Wheel Co. - Kansas City, KS	607,266
10	CMI - Cast Parts, Inc. - Cadillac, MI	604,100

Source: *US Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Metal Casting Facilities Reporting Only Die Casting SIC Codes (3363, 3364)*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	Water Gremlin Co. - White Bear Lake, MN	97,111
2	BTR Precision Die Casting - Russelville, KY	93,903
3	QX Inc. - Hamel, MN	67,772
4	AAP St. Marys Corp. - Saint Marys, OH	55,582
5	Impact Industries Inc. - Sandwich, IL	45,175
6	Tool-Die Eng. Co. - Solon, OH	29,005
7	Chrysler Corp. - Kokomo, IN	20,652
8	Metalloy Corp. - Freemont, IN	13,350
9	Tool Products. Inc. - New Hope, MN	12,194
10	Travis Pattern & Foundry, Inc. - Spokane, WA	11,614

Source: *US Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Ten Largest Volume TRI Releasing Facilities Reporting Foundry and Other SIC Codes (332, 3365, 3366, 3369)*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	GM Powertrain Defiance - Defiance, OH	3321	14,730,020
2	GMC Powertrain - Saginaw, MI	3321, 3365	2,709,764
3	Heatcraft Inc. - Grenada, MS	3585, 3351, 3366	1,369,306
4	American Steel Foundries - Granite City, IL	3325	1,245,343
5	Griffin Wheel Co. - Keokuk, IA	3325	1,065,104
6	Griffin Wheel Co. - Groveport, OH	3325	1,042,040
7	Geneva Steel - Vineyard, UT	3312, 3317, 3325	918,478
8	Griffin Wheel Co. - Bessemer, AL	3325	742,135
9	U.S. Pipe & Foundry Co. - Birmingham, AL	3321	738,200
10	American Steel Foundries - East Chicago, IN	3325	625,191

Source: *US Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Die Casting and Other SIC Codes (3363, 3364)*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	Water Gremlin Co. - White Bear Lake, MN	3364, 3949	97,111
2	BTR Precision Die Casting - Russelville, KY	3363	93,903
3	Honeywell Inc. Home & Building - Golden Valley, MN	3822, 3363, 3900	87,937
4	QX Inc. - Hamel, MN	3363	67,772
5	AAP St. Marys Corp. - Saint Marys, OH	3363	55,582
6	Impact Industries Inc. - Sandwich, IL	3363	45,175
7	Tool-Die Eng. Co. - Solon, OH	3363	29,005
8	TAC Manufacturing - Jackson, MI	3086, 3363, 3714	25,684
9	Superior Ind. Intl., Inc. - Johnson City, TN	3714, 3363, 3398	25,250
10	General Electric Co. - Hendersonville, NC	3646, 3363	20,780

Source: *US Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Foundries (SIC 332, 3365, 3366, and 3369) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	232	43%	58%	0%	1%	18%	0%	0%	32%
1995	272	40%	58%	0%	2%	16%	0%	1%	32%
1996	264	---	54%	0%	2%	20%	0%	1%	24%
1997	261	---	53%	0%	2%	21%	0%	1%	24%

Source: *1995 Toxics Release Inventory Database.*
* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.
[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.
[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.
[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Source Reduction and Recycling Activity for Die Casting Facilities (SIC 3363 and 3364) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	60	23%	69%	0%	3%	27%	0%	0%	2%
1995	63	21%	75%	0%	3%	21%	0%	0%	2%
1996	64	---	75%	0%	3%	21%	0%	0%	1%
1997	64	---	76%	0%	2%	21%	0%	0%	1%

Source: *1995 Toxics Release Inventory Database.*
* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.
[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.
[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.
[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Metal Casting Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	15	8	44	20	2	3	67%	33%	0.07
II	26	16	128	12	10	19	68%	32%	0.15
III	74	61	458	10	19	29	83%	17%	0.06
IV	77	53	505	9	12	24	88%	12%	0.05
V	307	191	1,026	18	45	68	63%	37%	0.07
VI	44	25	103	26	6	14	43%	57%	0.14
VII	40	33	167	14	6	10	30%	70%	0.06
VIII	9	7	16	34	2	2	100%	0%	0.13
IX	54	15	46	70	4	5	100%	0%	0.11
X	23	15	42	33	7	17	94%	6%	0.40
TOTAL	669	424	2,535	16	113	191	71%	29%	0.08

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Nonferrous Metals

1995 TRI Releases for Nonferrous Metals Facilities (SICS 333 and 334) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Copper[M]	124	167,125	260,728	4,403	0	946,646	1,378,902	11,120
Chlorine	72	169,360	58,326,712	3,865	0	5	58,499,942	812,499
Nickel[C, M]	52	1,981	6,236	1,558	0	31,976	41,751	803
Copper Compounds[M]	51	811,158	419,775	5,906	92,497	38,636,759	39,966,095	783,649
Manganese[M]	47	11,969	8,983	7,641	0	49,401	77,994	1,659
Zinc Compounds[M]	46	318,405	732,115	16,347	963	44,567,486	45,635,316	992,072
Lead Compounds[C, M]	45	226,135	450,896	8,154	912	10,575,038	11,261,135	250,247
Aluminum (Fume or Dust)[M]	44	18,879	268,106	1,722	250	1,041,968	1,330,925	30,248
Lead[C, M]	43	287,346	172,345	939	0	1,730,105	2,190,735	50,947
Chromium[M]	41	1,003	2,819	870	0	4,105	8,797	215
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	41	183,993	7,888,871	0	0	0	8,072,864	196,899
Sulfuric Acid	35	71,900	1,087,252	171	0	5	1,159,328	33,124
Nitric Acid	31	64,941	47,962	0	5	0	112,908	3,642
Hydrogen Fluoride	27	2,578,811	2,121,089	0	0	0	4,699,900	174,070
Nickel Compounds[C, M]	25	5,949	18,121	3,366	10,690	1,795,198	1,833,324	73,333
Zinc (Fume or Dust)[M]	25	95,834	196,081	9,810	0	4,259,544	4,561,269	182,451
Ammonia	24	2,552,896	3,759,481	390,337	750	53,500	6,756,964	281,540
Chromium Compounds[C, M]	23	1,280	4,120	719	0	260,520	266,639	11,593
Antimony Compounds[M]	21	12,623	10,836	2,534	8,430	1,063,654	1,098,077	52,289
Arsenic Compounds[C, M]	19	68,319	35,448	2,071	54,800	1,303,367	1,464,005	77,053
Manganese Compounds[M]	16	1,135	3,282	2,001	0	2,017,021	2,023,439	126,465
Silver[M]	16	563	1,541	11	0	0	2,115	132
Antimony[M]	14	955	4,597	16	0	7,640	13,208	943
Polycyclic Aromatic Compounds[C]	13	20,913	545,736	72	0	800	567,521	43,655
Silver Compounds[M]	13	1,915	2,791	307	380	26,542	31,935	2,457
Carbonyl Sulfide	13	75,993	5,130,558	0	0	0	5,206,551	400,504
Barium Compounds[M]	12	2,023	1,119	882	0	0	4,024	335
Cadmium Compounds[C, M]	12	4,240	19,997	498	109	48,099	72,943	6,079
Cobalt[C, M]	12	292	521	284	0	0	1,097	91
Arsenic[C, M]	11	1,149	3,518	5	0	24,507	29,179	2,653
Phosphoric Acid	9	20,696	19,690	0	0	0	40,386	4,487
Nitrate Compounds	8	0	0	352	0	17,000	17,352	2,169
Cadmium[C, M]	8	2,392	2,007	253	0	19,196	23,848	2,981
Cyanide Compounds	6	1	516	1,814	0	0	2,331	389
Selenium Compounds[M]	6	559	38,248	251	3,640	110,250	152,948	25,491
Ethylene Glycol	6	40	1,900	0	0	0	1,940	323
Molybdenum Trioxide	6	116,920	5,460	46,863	0	0	169,243	28,207
Xylene (Mixed Isomers)	6	22,345	57,030	0	0	0	79,375	13,229
Cobalt Compounds[C, M]	5	253	1,013	1,275	0	250	2,791	558
Methanol	5	217,938	34,362	13,260	0	0	265,560	53,112
Certain Glycol Ethers	4	13,366	66,208	315	0	0	79,889	19,972
Thiourea[C]	4	60	0	0	5,000	250	5,310	1,328
1,1,1-Trichloroethane[O]	4	88,262	0	0	0	0	88,262	22,066
Toluene	4	34,251	58,137	0	0	0	92,388	23,097
Beryllium[C, M]	4	1	831	17	0	21,244	22,093	5,523
Methyl Ethyl Ketone	3	90,005	46,829	12	0	0	136,846	45,615
Trichloroethylene[C]	3	115,473	269,000	10	0	0	384,483	128,161
Naphthalene	3	6,900	10,454	0	0	0	17,354	5,785
1,2,4-trimethylbenzene	3	23,550	9,750	0	0	0	33,300	11,100
Methyl Isobutyl Ketone	3	506,646	758,346	16,629	0	0	1,281,621	427,207
M-xylene	3	13,050	6,233	0	0	0	19,283	6,428
Mercury Compounds[M]	2	5	390	5	0	0	400	200
Formic Acid	2	11	121	0	0	0	132	66
Hexachloroethane	2	5	250	0	0	0	255	128
N-butyl Alcohol	2	1,700	19,374	3	0	0	21,077	10,539
Chlorodifluoromethane[O]	2	47,300	0	0	0	0	47,300	23,650
Styrene[C]	2	830	5	0	0	0	835	418
Phenol	2	3,015	5	0	0	0	3,020	1,510
Hydrazine[C]	2	5	785	0	0	0	790	395
Lithium Carbonate	2	505	267	0	0	0	772	386

1995 TRI Releases for Nonferrous Metals Facilities (SICS 333 and 334) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Aluminum Oxide (Fibrous Forms)[M]	2	0	138	0	0	0	138	69
Titanium Tetrachloride	2	3,250	250	0	0	0	3,500	1,750
Phosphorus (Yellow or White)	2	0	0	250	0	0	250	125
Formaldehyde[C]	1	7,000	140	0	0	0	7,140	7,140
Dichloromethane[C]	1	4,265	2,768	0	0	0	7,033	7,033
Dichlorodifluoromethane[O]	1	22,000	0	0	0	0	22,000	22,000
Dibutyl Phthalate	1	0	1	0	0	0	1	1
Phenanthrene	1	0	24,296	1	0	0	24,297	24,297
Cumene	1	840	970	0	0	0	1,810	1,810
Acetophenone	1	500	15,000	13	0	0	15,513	15,513
Ethylbenzene	1	590	520	0	0	0	1,110	1,110
Anthracene	1	0	3,612	0	0	0	3,612	3,612
Triethylamine	1	0	41,000	29	0	0	41,029	41,029
Tetrachloroethylene[C]	1	891	183,000	0	0	0	183,891	183,891
Sodium Dimethyldithiocarbamate	1	250	250	0	0	0	500	500
Calcium Cyanamide	1	0	0	0	0	0	0	0
Decabromodiphenyl Oxide	1	0	250	0	0	0	250	250
Cresol (Mixed Isomers)	1	250	0	250	0	750	1,250	1,250
Asbestos (Friable)[C]	1	0	0	0	0	0	0	0
Thallium[M]	1	5	250	0	0	755	1,010	1,010
Barium[M]	1	84	24	0	0	0	108	108
Vanadium (Fume or Dust)[M]	1	0	0	0	0	0	0	0
Sodium Nitrite	1	0	0	0	0	0	0	0
Selenium[M]	1	0	0	0	0	0	0	0
	282**	9,125,094	83,211,316	546,091	178,426	108,613,581	201,674,508	715,158

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Nonferrous Metals Facilities (SICs 333 and 334) by Number of Facilities Reporting (pounds/year)

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Copper[M]	124	4,449	1,063,810	17,930,376	142,772	1,445	19,142,852	154,378
Chlorine	72	19	46	17,623	.	.	17,688	246
Nickel[C, M]	52	541	237,646	887,140	22,664	.	1,147,991	22,077
Copper Compounds[M]	51	2,654	3,546,621	25,112,251	109,601	.	28,771,127	564,140
Manganese[M]	47	258	170,868	413,064	1,519	.	585,709	12,462
Zinc Compounds[M]	46	26,827	27,129,255	8,359,752	1,822,798	.	37,338,632	811,709
Lead Compounds[C, M]	45	2,499	9,897,630	16,612,431	3,791,330	.	30,303,890	673,420
Aluminum (Fume or Dust)[M]	44	1,255	3,034,888	2,914,423	760	.	5,951,326	135,257
Lead[C, M]	43	1,593	515,174	2,970,376	90,493	250	3,577,891	83,207
Chromium[M]	41	34	64,984	314,078	47,226	.	426,322	10,398
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	41	184	21,385	37,996	30,453	.	90,018	2,196
Sulfuric Acid	35	5	3,000,500	319,044	35,250	.	3,354,799	95,851
Nitric Acid	31	255	280	63,036	153,833	.	217,404	7,013
Hydrogen Fluoride	27	0	.	.	84,442	.	84,442	3,127
Nickel Compounds[C, M]	25	306	954,973	2,388,518	64,221	.	3,408,018	136,321
Zinc (Fume or Dust)[M]	25	250	134,258	2,472,155	372,821	.	2,979,484	119,179
Ammonia	24	52,200	153,161	.	440	.	205,801	8,575
Chromium Compounds[C, M]	23	54	917,451	520,450	9,325	.	1,447,280	62,925
Antimony Compounds[M]	21	1,291	1,704,673	1,677,611	254,782	.	3,638,357	173,255
Arsenic Compounds[C, M]	19	117	403,626	352,573	1,169,665	.	1,925,981	101,367
Manganese Compounds[M]	16	7	3,790,791	670,953	751	.	4,462,502	278,906
Silver[M]	16	84	5,705	286,155	.	.	291,944	18,247
Antimony[M]	14	687	31,730	4,064,663	.	.	4,097,085	292,649
Polycyclic Aromatic Compounds[C]	13	0	945,420	.	22	.	945,442	72,726
Silver Compounds[M]	13	48	2,289	212,919	14,217	.	229,473	17,652
Carbonyl Sulfide	13	0	.	.	.	.	0	0
Barium Compounds[M]	12	10	223,455	214,595	224,535	.	662,595	55,216
Cadmium Compounds[C, M]	12	560	1,424,643	692,581	70,410	.	2,188,194	182,350
Cobalt[C, M]	12	10	28,594	96,856	0	.	125,460	10,455
Arsenic[C, M]	11	54	15,163	149,760	37,422	.	202,399	18,400
Phosphoric Acid	9	112	.	.	.	.	112	12
Nitrate Compounds	8	1,582,229	0	.	.	.	1,582,229	197,779
Cadmium[C, M]	8	15	11,667	138,215	12,259	.	162,156	20,270
Cyanide Compounds	6	2	84,054	.	3,791	.	87,847	14,641
Selenium Compounds[M]	6	1	52,297	38	6,478	.	58,814	9,802
Ethylene Glycol	6	15,000	.	4,595	5,647	2,270	27,512	4,585
Molybdenum Trioxide	6	0	68,896	174,275	.	.	243,171	40,529
Xylene (Mixed Isomers)	6	0	.	152,904	1,703	161,440	316,047	52,675
Cobalt Compounds[C, M]	5	250	17,739	36,798	.	.	54,787	10,957
Methanol	5	2,270,000	848	.	26,860	31,315	2,329,023	465,805
Certain Glycol Ethers	4	7,386	.	.	1,272	4,223	12,881	3,220
Thiourea[C]	4	0	.	.	.	.	0	0
1,1,1-Trichloroethane[O]	4	0	.	.	160	.	160	40
Toluene	4	0	.	9,618	7,617	50,334	67,569	16,892
Beryllium[C, M]	4	0	6,943	7,977	377	.	15,297	3,824
Methyl Ethyl Ketone	3	10	.	51,234	6,800	234,070	292,114	97,371
Trichloroethylene[C]	3	82	.	256,000	1,246	17,491	274,819	91,606
Naphthalene	3	0	.	.	150	5,476	5,626	1,875
1,2,4-trimethylbenzene	3	0	.	.	300	5,750	6,050	2,017
Methyl Isobutyl Ketone	3	0	4,779	.	690	15,000	20,469	6,823
M-xylene	3	0	.	22	.	9,502	9,524	3,175
Mercury Compounds[M]	2	0	187,000	.	1,340	.	188,340	94,170
Formic Acid	2	0	0	.	.	.	0	0
Hexachloroethane	2	0	.	.	.	.	0	0
N-butyl Alcohol	2	0	.	.	60	7,785	7,845	3,923
Chlorodifluoromethane[O]	2	0	.	.	.	.	0	0
Styrene[C]	2	0	80	.	.	.	80	40
Phenol	2	5	0	.	.	.	5	3
Hydrazine[C]	2	0	.	.	.	.	0	0

1995 TRI Transfers for Nonferrous Metals Facilities (SICs 333 and 334) by Number of Facilities Reporting (pounds/year)

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Lithium Carbonate	2	0	.	.	.	.	0	0
Aluminum Oxide (Fibrous Forms)[M]	2	0	.	.	.	.	0	0
Titanium Tetrachloride	2	0	.	.	.	.	0	0
Phosphorus (Yellow or White)	2	250	.	620	.	.	870	435
Formaldehyde[C]	1	33,700	.	.	.	.	33,700	33,700
Dichloromethane[C]	1	763	.	159,388	19	.	160,170	160,170
Dichlorodifluoromethane[O]	1	0	.	.	.	.	0	0
Dibutyl Phthalate	1	0	.	643	.	169	812	812
Phenanthrene	1	0	26,743	.	2	.	26,745	26,745
Cumene	1	0	.	.	30	510	540	540
Acetophenone	1	180	2,474	.	.	.	2,654	2,654
Ethylbenzene	1	0	.	.	21	350	371	371
Anthracene	1	0	11,542	.	1	.	11,543	11,543
Triethylamine	1	0	.	.	.	.	0	0
Tetrachloroethylene[C]	1	0	.	.	84,411	.	84,411	84,411
Sodium Dimethyldithiocarbamate	1	0	.	.	.	.	0	0
Calcium Cyanamide	1	0	.	.	.	.	0	0
Decabromodiphenyl Oxide	1	0	2,409	.	.	.	2,409	2,409
Cresol (Mixed Isomers)	1	0	.	.	.	.	0	0
Asbestos (Friable)[C]	1	0	18,000	.	.	.	18,000	18,000
Thallium[M]	1	5	.	3,852	190	.	4,047	4,047
Barium[M]	1	250	31,000	.	.	.	31,250	31,250
Vanadium (Fume or Dust)[M]	1	0	.	.	.	.	0	0
Sodium Nitrite	1	0	.	.	.	.	0	0
Selenium[M]	1	0	.	.	.	.	0	0
	282**	4,006,491	59,945,490	90,747,558	8,713,176	547,380	163,960,105	581,419

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Nonferrous Metals Facilities Reporting Only SIC 333 and 334*		
Rank	Facility[1]	Total TRI Releases in Pounds
1	Magnesium Corp. Of America, Rowley, Utah	64,339,080
2	Asarco Inc., East Helena, Montana	39,517,514
3	Asarco Inc., Hayden, Arizona	18,310,475
4	Phelps Dodge Hidalgo Inc., Playas, New Mexico	10,346,210
5	Doe Run Co., Herculaneum, Missouri	8,106,633
6	Chino Mines Co., Hurley, New Mexico	7,094,737
7	Asarco Inc., Annapolis, Missouri	6,525,797
8	Kennecott Utah Copper, Magna, Utah	5,990,210
9	Climax Molybdenum Co., Fort Madison, Iowa	3,354,639
10	U.S. Vanadium Corp., Hot Springs, Arkansas	1,537,510

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 333 and 334 or SIC 333 and 334 and Other SIC Codes*			
Rank	Facility[1]	SIC Codes Reported in TRI	Total TRI Releases in Pounds
1	Magnesium Corp. Of America, Rowley, Utah	3339	64,339,080
2	Asarco Inc., East Helena, Montana	3339	39,517,514
3	Asarco Inc., Hayden, Arizona	3331	18,310,475
4	Cyprus Miami Mining Corp., Claypool, Arizona	1021, 3331, 3351	10,857,552
5	Phelps Dodge Hidalgo Inc., Playas, New Mexico	3331	10,346,210
6	Doe Run Co., Herculaneum, Missouri	3339	8,106,633
7	Chino Mines Co., Hurley, New Mexico	3331	7,094,737
8	Asarco Inc., Annapolis, Missouri	3339	6,525,797
9	Kennecott Utah Copper, Magna, Utah	3331	5,990,210
10	Climax Molybdenum Co., Fort Madison, Iowa	2819, 3339	3,495,280

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Non-Ferrous Metals (SICs 333 and 334) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	1,744	22%	66%	1%	14%	5%	0%	0%	18%
1995	1,884	19%	64%	1%	16%	5%	0%	1%	16%
1996	1,946	---	66%	1%	16%	4%	0%	1%	13%
1997	1,975	---	66%	1%	16%	4%	0%	1%	13%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Nonferrous Metals Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	10	7	17	35	3	5	40%	60%	0.29
II	14	11	99	8	6	10	90%	10%	0.10
III	21	18	249	5	7	15	69%	31%	0.06
IV	30	24	377	5	10	23	87%	13%	0.06
V	61	47	346	11	13	23	83%	17%	0.07
VI	19	15	177	6	7	27	56%	44%	0.15
VII	11	10	118	6	5	11	82%	18%	0.09
VIII	7	6	42	10	4	10	70%	30%	0.24
IX	16	12	72	13	5	11	100%	0%	0.15
X	14	11	143	6	8	39	85%	15%	0.27
TOTAL	203	161	1,640	7	68	174	78%	22%	0.11

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Fabricated Metal Products

1995 TRI Releases for Fabricated Metals Facilities (SIC 34) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Nitric Acid	451	193,971	226,243	1,515	92	5	421,826	935
Xylene (Mixed Isomers)	435	3,886,930	8,218,870	15	0	13,178	12,118,993	27,860
Nickel[C, M]	408	26,576	13,962	3,606	0	8,526	52,670	129
Copper[M]	406	26,779	50,800	2,763	0	3,818	84,160	207
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	386	175,106	696,995	512	250	255	873,118	2,262
Chromium[M]	369	37,206	13,288	3,074	0	36,568	90,136	244
Certain Glycol Ethers	366	5,036,567	14,694,162	2,625	0	5	19,733,359	53,916
Manganese[M]	316	70,399	15,583	1,574	9	48,180	135,745	430
Methyl Ethyl Ketone	297	2,355,296	5,993,426	505	0	16,326	8,365,553	28,167
Zinc Compounds[M]	282	277,935	236,219	39,625	0	64,676	618,455	2,193
Sulfuric Acid	280	326,477	76,481	1,500	0	10	404,468	1,445
Toluene	251	1,632,125	4,045,078	5	0	620	5,677,828	22,621
N-butyl Alcohol	245	3,061,391	8,220,818	0	0	0	11,282,209	46,050
Phosphoric Acid	225	94,496	77,190	0	526	0	172,212	765
Chromium Compounds[C, M]	218	12,239	20,451	2,036	49	5,133	39,908	183
Nickel Compounds[C, M]	208	12,772	8,466	2,479	0	6,678	30,395	146
Trichloroethylene[C]	205	2,714,967	3,945,968	275	0	2,705	6,663,915	32,507
Methyl Isobutyl Ketone	145	603,414	1,262,764	5	0	0	1,866,183	12,870
Lead[C, M]	141	6,841	8,393	1,281	0	751	17,266	122
Copper Compounds[M]	126	7,680	16,491	3,661	0	433	28,265	224
Cyanide Compounds	115	9,273	12,713	539	0	540	23,065	201
Ammonia	91	199,549	612,182	19,450	0	33,167	864,348	9,498
1,1,1-Trichloroethane[O]	89	1,037,499	639,877	20	0	2,500	1,679,896	18,875
Ethylbenzene	87	204,171	414,111	5	0	0	618,287	7,107
Zinc (Fume or Dust)[M]	87	80,883	96,542	1,593	0	153,814	332,832	3,826
1,2,4-trimethylbenzene	83	380,756	654,961	5	0	0	1,035,722	12,479
Manganese Compounds[M]	80	11,128	4,221	2,043	0	1,323	18,715	234
Hydrogen Fluoride	79	22,492	37,301	0	0	0	59,793	757
Methanol	75	159,065	341,513	0	0	0	500,578	6,674
Dichloromethane[C]	69	894,051	1,261,305	10	0	5	2,155,371	31,237
Nitrate Compounds	63	561	5,845	214,935	0	18,196	239,537	3,802
Tetrachloroethylene[C]	59	948,304	811,482	6	0	0	1,759,792	29,827
Diisocyanates	54	3,773	1,583	0	0	10	5,366	99
Chlorine	51	14,239	201,196	2,260	0	250	217,945	4,273
Lead Compounds[C, M]	43	3,343	8,092	1,228	0	5	12,668	295
Naphthalene	41	41,689	157,078	10	0	0	198,777	4,848
N-hexane	37	1,584,356	476,052	0	0	0	2,060,408	55,687
Styrene[C]	31	177,344	115,686	0	0	250	293,280	9,461
1,1-dichloro-1-fluoroethane[O]	30	337,012	315,046	0	0	5	652,063	21,735
Cobalt[C, M]	28	1,136	998	1,005	0	750	3,889	139
Ethylene Glycol	25	19,049	80,942	0	0	0	99,991	4,000
Formaldehyde[C]	21	6,755	40,198	204	0	0	47,157	2,246
Aluminum (Fume or Dust)[M]	21	15,043	16,260	505	0	250	32,058	1,527
Barium Compounds[M]	16	20,015	516	10	0	10	20,551	1,284
Sodium Nitrite	16	2,011	18,103	37	0	2,136	22,287	1,393
Chlorodifluoromethane[O]	12	360,633	3,570	0	0	0	364,203	30,350
Cadmium Compounds[C, M]	11	275	265	0	0	0	540	49
Propylene	11	25,436	18,275	0	0	0	43,711	3,974
Sec-butyl Alcohol	10	77,897	78,170	0	0	0	156,067	15,607
Cadmium[C, M]	10	10	0	0	0	250	260	26
Cobalt Compounds[C, M]	9	40	183	59	0	10	292	32
Antimony Compounds[M]	8	3,610	885	0	0	0	4,495	562
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	8	30,957	69,160	0	0	0	100,117	12,515
Dimethyl Phthalate	8	13,801	40,137	0	0	0	53,938	6,742
N-methyl-2-pyrrolidone	8	16,535	31,417	0	0	5	47,957	5,995
Polychlorinated Alkanes	6	15,179	5	6,146	0	0	21,330	3,555
M-xylene	6	1,060	16,510	0	0	0	17,570	2,928
Phenol	6	1,074	54	0	0	0	1,128	188
Cyclohexane	6	679,524	55,647	0	0	0	735,171	122,529

1995 TRI Releases for Fabricated Metals Facilities (SIC 34) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Silver Compounds[M]	5	256	326	9	0	0	591	118
Freon 113[O]	5	27,751	36,603	0	0	0	64,354	12,871
Cumene	5	4,364	60,070	0	0	0	64,434	12,887
2-ethoxyethanol	5	2,876	3,402	0	0	0	6,278	1,256
Di(2-ethylhexyl) Phthalate[C]	5	505	2,900	0	0	5	3,410	682
Aluminum Oxide (Fibrous Forms)[M]	5	250	250	0	0	67,700	68,200	13,640
Silver[M]	5	15	255	0	0	0	270	54
Molybdenum Trioxide	3	250	5	0	0	2,500	2,755	918
Antimony[M]	3	0	82	0	0	0	82	27
N,N-dimethylformamide[C]	2	500	553	0	0	0	1,053	527
Benzene[C]	2	2,395	0	0	0	0	2,395	1,198
4,4'-isopropylidenediphenol	2	0	0	0	0	0	0	0
Toluene-2,6-diisocyanate[C]	2	250	0	0	0	0	250	125
Benzoyl Peroxide	2	0	0	0	0	45	45	23
O-xylene	2	253	758	0	0	0	1,011	506
2-methoxyethanol	2	500	2,907	0	0	0	3,407	1,704
Sodium Dimethyldithiocarbamate	2	0	0	0	0	0	0	0
Asbestos (Friable)[C]	2	5	0	0	0	4,294	4,299	2,150
Beryllium Compounds[C, M]	1	0	0	0	0	0	0	0
Formic Acid	1	5	0	0	0	0	5	5
Chloroform[C]	1	5	0	0	0	0	5	5
Hexachloroethane	1	0	250	0	0	0	250	250
Trichlorofluoromethane[O]	1	6,501	700	0	0	0	7,201	7,201
Dichlorodifluoromethane[O]	1	0	0	17,000	0	0	17,000	17,000
Methyl Methacrylate	1	1,300	0	0	0	0	1,300	1,300
Phthalic Anhydride	1	5	0	0	0	0	5	5
Vinyl Acetate[C]	1	23	26,267	0	0	0	26,290	26,290
Cyclohexanol	1	1,320	801	0	0	0	2,121	2,121
Diethanolamine	1	5	0	0	0	0	5	5
Catechol	1	5	250	0	0	0	255	255
1,2,4-trichlorobenzene	1	0	3,545	0	0	0	3,545	3,545
Triethylamine	1	0	190	0	0	0	190	190
Nitrilotriacetic Acid[C]	1	0	0	0	0	0	0	0
Ethyl Acrylate[C]	1	0	4,653	0	0	0	4,653	4,653
Butyl Acrylate	1	148	39	0	0	0	187	187
Lithium Carbonate	1	0	0	0	0	0	0	0
Toluene-2,4-Diisocyanate[C]	1	0	0	0	0	0	0	0
Decabromodiphenyl Oxide	1	5	1,260	0	0	0	1,265	1,265
Polychlorinated Biphenyls[C]	1	0	0	0	0	0	0	0
Mercury[M]	1	5	0	0	0	0	5	5
Arsenic[C, M]	1	5	0	0	0	0	5	5
Barium[M]	1	0	0	0	0	0	0	0
Vanadium (Fume or Dust)[M]	1	42	110	0	0	0	152	152
Phosphorus (Yellow or White)	1	0	0	.	0	0	0	0
Selenium[M]	1	5	0	0	0	0	5	5
Ozone	1	0	8,200	0	0	0	8,200	8,200
	2,676**	28,059,902	54,646,194	334,135	926	495,887	83,537,044	31,217

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Fabricated Metals Facilities (SIC 34) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Nitric Acid	451	32,778	275,482	2,510,922	1,954,110	.	4,787,092	10,614
Xylene (Mixed Isomers)	435	5,705	10,101	2,760,891	403,473	3,260,166	6,440,336	14,805
Nickel[C, M]	408	21,589	349,229	16,197,080	481,846	531	17,050,275	41,790
Copper[M]	406	26,061	435,531	121,633,161	203,706	3,627	122,302,336	301,237
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	386	202,798	303,105	6,627,710	770,677	.	7,940,670	20,572
Chromium[M]	369	13,736	648,969	19,976,984	175,910	6,831	20,822,430	56,429
Certain Glycol Ethers	366	1,355,817	102,893	839,448	355,686	2,686,344	5,340,188	14,591
Manganese[M]	316	14,518	622,842	23,888,449	83,513	5	24,609,327	77,878
Methyl Ethyl Ketone	297	639	15,546	3,305,853	292,793	4,406,641	8,024,302	27,018
Zinc Compounds[M]	282	47,968	4,951,031	34,993,795	1,876,113	169,570	42,039,227	149,075
Sulfuric Acid	280	433,094	181,094	1,030,413	2,140,335	5,598	3,790,534	13,538
Toluene	251	744	26,212	988,103	306,805	1,869,916	3,191,780	12,716
N-butyl Alcohol	245	37,011	1,177	137,306	38,676	566,946	781,116	3,188
Phosphoric Acid	225	162,797	626,158	8,082,493	333,294	.	9,204,742	40,910
Chromium Compounds[C, M]	218	22,083	1,071,542	4,365,994	629,705	6,567	6,095,891	27,963
Nickel Compounds[C, M]	208	27,944	448,841	5,658,782	451,065	688	6,587,320	31,670
Trichloroethylene[C]	205	6,306	4,030	1,808,701	256,300	260,131	2,335,468	11,393
Methyl Isobutyl Ketone	145	1,785	27,177	847,087	71,510	580,942	1,528,501	10,541
Lead[C, M]	141	3,466	146,626	5,569,956	48,294	551	5,768,893	40,914
Copper Compounds[M]	126	17,932	614,447	33,657,388	405,592	8,241	34,703,600	275,425
Cyanide Compounds	115	12,127	10,576	21,621	154,845	.	199,669	1,736
Ammonia	91	234,366	1,655	74,531	27,731	.	338,283	3,717
1,1,1-Trichloroethane[O]	89	133	2,500	508,083	23,204	48,689	582,609	6,546
Ethylbenzene	87	870	8	150,447	12,060	186,616	350,001	4,023
Zinc (Fume or Dust)[M]	87	8,839	768,697	4,592,285	149,326	13,443	5,532,590	63,593
1,2,4-trimethylbenzene	83	5	444	29,213	12,579	162,578	204,819	2,468
Manganese Compounds[M]	80	2,117	638,453	2,698,534	5,278	270	3,344,652	41,808
Hydrogen Fluoride	79	568	7,300	86,807	106,386	.	201,061	2,545
Methanol	75	18,601	0	31,456	21,855	262,312	334,224	4,456
Dichloromethane[C]	69	30,312	375	231,727	103,583	40,440	406,437	5,890
Nitrate Compounds	63	2,595,236	114,841	.	38,491	.	2,748,568	43,628
Tetrachloroethylene[C]	59	271	4,667	504,431	99,374	69,123	677,866	11,489
Diisocyanates	54	5	8,642	74,425	11,075	3,700	97,847	1,812
Chlorine	51	13,118	3,092	1,042,709	1,390	.	1,060,309	20,790
Lead Compounds[C, M]	43	1,664	64,880	1,867,802	88,248	497	2,023,091	47,049
Naphthalene	41	3,321	94	45,808	10,787	68,735	128,745	3,140
N-hexane	37	0	.	21,352	1,771	16,698	45,409	1,227
Styrene[C]	31	500	9,900	.	2,697	11,412	24,509	791
1,1-dichloro-1-fluoroethane[O]	30	0	4,200	51,001	15,612	13,295	84,108	2,804
Cobalt[C, M]	28	351	7,716	1,156,756	880	10	1,165,713	41,633
Ethylene Glycol	25	75,173	51,819	3,176	28,307	17,284	175,759	7,030
Formaldehyde[C]	21	159,661	5	.	207	3,109	162,982	7,761
Aluminum (Fume or Dust)[M]	21	1,260	280,114	607,236	12,813	.	901,423	42,925
Barium Compounds[M]	16	258	331,542	1,750	7,637	16,493	357,680	22,355
Sodium Nitrite	16	702,018	4,814	230	74,910	.	781,972	48,873
Chlorodifluoromethane[O]	12	0	450	250	455	.	1,155	96
Cadmium Compounds[C, M]	11	1,049	87,422	36,040	11,218	.	135,729	12,339
Propylene	11	0	.	.	.	.	0	0
Sec-butyl Alcohol	10	0	.	.	2,501	1,224	3,725	373
Cadmium[C, M]	10	793	28,610	10,521	.	.	44,534	4,453
Cobalt Compounds[C, M]	9	5	30,388	213,173	292	95	243,953	27,106
Antimony Compounds[M]	8	250	29,907	1,200	38,728	.	70,085	8,761
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	8	0	.	.	11,000	2,000	13,000	1,625
Dimethyl Phthalate	8	0	.	.	318	26,134	26,452	3,307
N-methyl-2-pyrrolidone	8	20,345	907	189,421	4,842	9,600	225,115	28,139
Polychlorinated Alkanes	6	5	3,300	42,585	.	93,657	139,547	23,258
M-xylene	6	0	.	7,504	.	27,974	35,478	5,913
Phenol	6	0	2,434	.	.	.	2,434	406

1995 TRI Transfers for Fabricated Metals Facilities (SIC 34) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Cyclohexane	6	0	.	.	1,117	1,200	2,317	386
Silver Compounds[M]	5	517	.	112,473	4,209	.	117,199	23,440
Freon 113[O]	5	0	.	6,214	1,549	4,139	11,902	2,380
Cumene	5	0	.	832	94	8,381	9,307	1,861
2-ethoxyethanol	5	10	.	.	.	23,107	23,117	4,623
Di(2-ethylhexyl) Phthalate[C]	5	5	4,292	.	5,200	10,600	20,097	4,019
Aluminum Oxide (Fibrous Forms)[M]	5	0	1,444,850	14,325	.	.	1,459,175	291,835
Silver[M]	5	15	1,755	268,142	.	.	269,912	53,982
Molybdenum Trioxide	3	0	1,005	5,550	.	.	6,555	2,185
Antimony[M]	3	0	5,200	88,120	85	.	93,405	31,135
N,N-dimethylformamide[C]	2	10	.	.	.	11,565	11,575	5,788
Benzene[C]	2	0	.	.	.	.	0	0
4,4'-isopropylidenediphenol	2	0	250	.	.	.	250	125
Toluene-2,6-diisocyanate[C]	2	0	.	.	.	.	0	0
Benzoyl Peroxide	2	0	250	.	.	.	250	125
O-xylene	2	5	.	.	.	.	5	3
2-methoxyethanol	2	10	.	.	.	72,457	72,467	36,234
Sodium Dimethyldithiocarbamate	2	8,205	.	.	5	.	8,210	4,105
Asbestos (Friable)[C]	2	0	33,688	.	.	.	33,688	16,844
Beryllium Compounds[C, M]	1	0	.	1,005	.	.	1,005	1,005
Formic Acid	1	5	5	.	.	.	10	10
Chloroform[C]	1	5	5	.	.	.	10	10
Hexachloroethane	1	0	250	.	.	.	250	250
Trichlorofluoromethane[O]	1	0	3,877	16,912	2,283	.	23,072	23,072
Dichlorodifluoromethane[O]	1	0	.	.	.	.	0	0
Methyl Methacrylate	1	0	.	.	.	300	300	300
Phthalic Anhydride	1	0	250	.	.	.	250	250
Vinyl Acetate[C]	1	0	.	.	.	750	750	750
Cyclohexanol	1	0	.	.	.	1,500	1,500	1,500
Diethanolamine	1	750	.	14,000	.	.	14,750	14,750
Catechol	1	15,000	.	.	.	.	15,000	15,000
1,2,4-trichlorobenzene	1	5	.	.	.	5,348	5,353	5,353
Triethylamine	1	0	.	.	.	.	0	0
Nitrilotriacetic Acid[C]	1	0	.	.	.	.	0	0
Ethyl Acrylate[C]	1	0	.	.	.	.	0	0
Butyl Acrylate	1	0	.	.	.	750	750	750
Lithium Carbonate	1	0	.	.	.	.	0	0
Toluene-2,4-Diisocyanate[C]	1	0	.	.	.	.	0	0
Decabromodiphenyl Oxide	1	0	10,000	.	.	.	10,000	10,000
Polychlorinated Biphenyls[C]	1	0	.	.	0	.	0	0
Mercury[M]	1	5	5	.	.	.	10	10
Barium[M]	1	5	5	.	.	.	10	10
Vanadium (Fume or Dust)[M]	1	60	13,000	820	.	.	13,880	13,880
Phosphorus (Yellow or White)	1	0	.	.	.	.	0	0
Selenium[M]	1	5	5	.	.	.	10	10
Ozone	1	0	.	.	.	.	0	0
	2676**	6,342,614	14,880,482	309,710,983	12,374,345	15,093,131	358,466,263	133,956

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Fabricated Metals Facilities Reporting Only SIC 34*		
Rank	Facility[1]	Total TRI Releases in Pounds
1	Reynolds Metals Co., Sheffield, Alabama	2,886,960
2	Metal Container Corp., New Windsor, New York	852,250
3	U.S. Can Co., Weirton, Wvoming	824,344
4	Piper Impact Inc., New Albany, Misssissippi	791,750
5	American National Can Co., Saint Louis, Missouri	666,500
6	Metal Container Corp., Fort Atkinson, Wisconsin	650,250
7	American Natl. Can Co., Winston-Salem, North Carolina	647,499
8	Plastene Supply Co., Portageville, Missouri	620,564
9	Ken-koat Inc., Huntington, Indiana	600,526
10	American Safety Razor Inc., Verona, Virginia	585,290

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 34 or SIC 34 and Other SIC Codes*			
Rank	Facility[1]	SIC Codes Reported in TRI	Total TRI Releases in Pounds
1	Reynolds Metals Co., Sheffield, Alabama	3479	2,886,960
2	Metal Container Corp., New Windsor, New York	3411	852,250
3	U.S. Can Co., Weirton, West Virginia	3411	824,344
4	Piper Impact Inc., New Albany, Mississippi	3482, 3489	791,750
5	GMC, Flint, Michigan	3465, 3710, 3714	742,779
6	Ingalls Shipbuilding Inc., Pascagoula, Mississippi	3441, 3443, 3731	723,560
7	American National Can Co., Saint Louis, Missouri	3411	666,500
8	Metal Container Corp., Fort Atkinson, Wisconsin	3411	650,250
9	American Natl. Can Co., Winston-salem, North Carolina	3411	647,499
10	Plastene Supply Co., Portageville, Missouri	3471	620,564

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Fabricated Metals Facilities (SIC 34) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	1,148	39%	21%	2%	42%	24%	1%	1%	11%
1995	1,037	43%	21%	2%	34%	30%	1%	2%	11%
1996	962	---	17%	2%	37%	32%	1%	2%	9%
1997	985	---	18%	2%	36%	32%	1%	2%	9%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Fabricated Metal Products Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	222	158	608	22	53	84	73%	27%	0.14
II	185	144	716	16	43	97	86%	14%	0.14
III	248	187	1,071	14	45	76	87%	13%	0.07
IV	403	296	1,765	14	50	83	89%	11%	0.05
V	1,082	646	2,358	28	99	148	57%	43%	0.06
VI	242	140	435	33	30	50	70%	30%	0.11
VII	163	113	498	20	25	36	81%	19%	0.07
VIII	60	36	111	32	9	11	55%	45%	0.10
IX	238	101	233	61	5	7	71%	29%	0.03
X	63	37	119	32	6	8	63%	37%	0.07
TOTAL	2,906	1,858	7,914	22	365	600	75%	25%	0.08

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Electronics and Computers

1995 TRI Releases for Electronics and Computers Manufacturing Facilities (SIC 367) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Nitric Acid	155	16,577	86,676	0	0	10	103,263	666
Ammonia	148	77,545	641,703	15,660	0	750	735,658	4,971
Copper[M]	118	1,810	3,998	548	0	11,165	17,521	148
Hydrochloric Acid (1995 and after "Acid	105	8,759	141,819	0	0	255	150,833	1,437
Hydrogen Fluoride	97	6,989	85,136	7,801	0	10	99,936	1,030
Phosphoric Acid	93	4,813	27,326	0	5	5	32,149	346
Sulfuric Acid	93	13,289	54,455	0	0	0	67,744	728
Copper Compounds[M]	84	3,571	10,947	2,035	0	2,441	18,994	226
Certain Glycol Ethers	41	49,989	259,575	12,373	0	12,000	333,937	8,145
Nitrate Compounds	39	62	1,634	212,913	0	4,510	219,119	5,618
Methanol	35	76,379	295,749	2,363	0	0	374,491	10,700
N-methyl-2-pyrrolidone	35	4,340	142,062	1,500	0	13,250	161,152	4,604
Formaldehyde[C]	31	6,990	36,018	250	0	0	43,258	1,395
Xylene (Mixed Isomers)	28	13,150	189,741	0	0	0	202,891	7,246
Ethylene Glycol	26	8,277	20,149	870	0	0	29,296	1,127
Sodium Dimethyldithiocarbamate	25	422	255	0	0	0	677	27
Lead Compounds[C, M]	23	1,289	3,159	530	0	0	4,978	216
Lead[C, M]	21	515	1,294	53	0	2,100	3,962	189
Methyl Ethyl Ketone	19	81,036	107,646	9	0	0	188,691	9,931
Toluene	17	43,159	416,403	59	0	250	459,871	27,051
Chlorine	15	2,047	2,825	0	0	0	4,872	325
Trichloroethylene[C]	14	102,201	366,797	0	0	0	468,998	33,500
N,N-dimethylformamide[C]	10	28,226	73,356	0	0	0	101,582	10,158
Nickel Compounds[C, M]	9	261	459	69	0	0	789	88
Zinc Compounds[M]	8	1,067	4,281	276	0	0	5,624	703
1,1,1-Trichloroethane[O]	7	21,755	69,787	0	0	0	91,542	13,077
Barium Compounds[M]	5	5	5	86	0	0	96	19
1,1-dichloro-1-fluoroethane[O]	5	58,850	33,274	0	0	0	92,124	18,425
Chromium Compounds[C, M]	4	10	5	182	0	0	197	49
Dichloromethane[C]	4	5,455	22,558	0	0	0	28,013	7,003
2-methoxyethanol	4	4,905	38,030	0	0	0	42,935	10,734
Tetrachloroethylene[C]	4	5,790	100,876	0	0	0	106,666	26,667
Antimony Compounds[M]	3	23	32	3	0	0	58	19
1,2-Dichlorobenzene	3	3,200	39,842	0	0	0	43,042	14,347
Methyl Isobutyl Ketone	3	561	39,763	0	0	0	40,324	13,441
Phenol	3	1,550	3,980	250	0	0	5,780	1,927
Arsenic Compounds[C, M]	2	0	0	3	0	0	3	2
Diisocyanates	2	0	0	0	0	0	0	0
Ethylbenzene	2	3,150	3,400	0	0	0	6,550	3,275
1,2,4-trichlorobenzene	2	0	9,305	0	0	0	9,305	4,653
Chromium[M]	2	0	0	0	0	0	0	0
Cobalt Compounds[C, M]	1	6	3	1	0	0	10	10
Formic Acid	1	250	750	0	0	0	1,000	1,000
Isopropyl Alcohol (Manufacturing,	1	625	0	0	0	0	625	625
N-butyl Alcohol	1	13	25	0	0	0	38	38
Naphthalene	1	0	400	0	0	0	400	400
N-hexane	1	251	803	0	0	0	1,054	1,054
Catechol	1	5	250	0	0	0	255	255
Manganese[M]	1	0	0	0	0	0	0	0
Nickel[C, M]	1	0	0	0	0	0	0	0
Cobalt[C, M]	1	0	0	0	0	0	0	0
Bromine	1	250	250	0	0	5	505	505
Ozone	1	0	45	0	0	0	45	45
	407**	659,417	3,336,846	257,834	5	46,751	4,300,853	10,567

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Electronics and Computers Manufacturing Facilities (SIC 367) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Nitric Acid	155	18,808	12,408	120,884	369,329	249	531,686	3,430
Ammonia	148	922,789	3,366	6,450,618	359,677	249	7,736,699	52,275
Copper[M]	118	34,570	107,982	10,452,486	173,157	1	10,790,121	91,442
Hydrochloric Acid (1995 and after "Acid	105	31,997	1,011	1,139,645	716,546	1,496	1,892,347	18,022
Hydrogen Fluoride	97	31,912	39,548	30,143	451,171	336	553,110	5,702
Phosphoric Acid	93	50,574	48,183	244,006	54,046	249	397,058	4,269
Sulfuric Acid	93	486,605	0	22,340	184,738	.	693,683	7,459
Copper Compounds[M]	84	24,909	143,008	14,549,667	290,760	19	15,008,363	178,671
Certain Glycol Ethers	41	518,096	3,144	162,174	265,871	748,650	1,697,935	41,413
Nitrate Compounds	39	4,997,357	93,290	.	109,564	.	5,200,211	133,339
Methanol	35	185,734	900	76,920	80,957	1,311,953	1,656,464	47,328
N-methyl-2-pyrrolidone	35	361,962	41,362	2,015,615	592,498	934,312	3,945,749	112,736
Formaldehyde[C]	31	161,952	120	37,000	4,678	.	203,750	6,573
Xylene (Mixed Isomers)	28	541	13,053	40,600	243,216	2,506,507	2,803,917	100,140
Ethylene Glycol	26	1,023,761	581	.	96,655	319,452	1,440,449	55,402
Sodium Dimethyldithiocarbamate	25	19,981	100,935	196,347	263,811	.	581,074	23,243
Lead Compounds[C, M]	23	2,061	1,059,069	3,738,859	139,378	100	4,939,467	214,759
Lead[C, M]	21	4,064	28,738	981,129	3,735	19	1,017,685	48,461
Methyl Ethyl Ketone	19	0	250	1,955	32,182	507,364	541,751	28,513
Toluene	17	516	22,200	506,303	26,184	246,895	802,098	47,182
Chlorine	15	1,065	.	1,614,373	1,028	.	1,616,466	107,764
Trichloroethylene[C]	14	2,730	.	314,644	27,769	40,800	385,943	27,567
N,N-dimethylformamide[C]	10	0	.	.	13,397	41,242	54,639	5,464
Nickel Compounds[C, M]	9	2,561	4,545	74,694	30,751	700	113,251	12,583
Zinc Compounds[M]	8	2,020	417,475	397,857	95,561	.	912,913	114,114
1,1,1-Trichloroethane[O]	7	255	.	57,993	13,451	20,400	92,099	13,157
Barium Compounds[M]	5	505	145,401	522,726	65	.	668,697	133,739
1,1-dichloro-1-fluoroethane[O]	5	0	.	30,055	.	9,600	39,655	7,931
Chromium Compounds[C, M]	4	0	7,973	159	250	.	8,382	2,096
Dichloromethane[C]	4	772	50	165,888	269	30,860	197,839	49,460
2-methoxyethanol	4	1,800	.	.	550	2,700	5,050	1,263
Tetrachloroethylene[C]	4	0	27	241,053	577,822	314,000	1,132,902	283,226
Antimony Compounds[M]	3	0	24,447	26,707	.	.	51,154	17,051
1,2-Dichlorobenzene	3	0	71	.	6,241	380,900	387,212	129,071
Methyl Isobutyl Ketone	3	0	.	.	.	26,484	26,484	8,828
Phenol	3	2,380	.	.	2,710	228,820	233,910	77,970
Arsenic Compounds[C, M]	2	0	2,782	18,881	.	.	21,663	10,832
Diisocyanates	2	0	13,300	.	19,110	.	32,410	16,205
Ethylbenzene	2	0	5	.	700	227,750	228,455	114,228
1,2,4-trichlorobenzene	2	1,445	.	.	32,840	5,348	39,633	19,817
Chromium[M]	2	408	15,940	3,641	410	.	20,399	10,200
Cobalt Compounds[C, M]	1	0	4,276	.	.	.	4,276	4,276
Formic Acid	1	19,000	.	.	.	.	19,000	19,000
Isopropyl Alcohol (Manufacturing,	1	0	.	1,506	.	.	1,506	1,506
N-butyl Alcohol	1	0	.	.	.	4,999	4,999	4,999
Naphthalene	1	0	.	.	.	.	0	0
N-hexane	1	0	.	.	.	7,435	7,435	7,435
Catechol	1	15,000	.	.	.	.	15,000	15,000
Manganese[M]	1	0	266	4,075	160	.	4,501	4,501
Nickel[C, M]	1	5	4,003	4,265	7	.	8,280	8,280
Cobalt[C, M]	1	0	266	1,069	.	.	1,335	1,335
Bromine	1	5	250	.	.	.	255	255
Ozone	1	0	.	.	.	.	0	0
	407**	8,928,140	2,360,225	44,246,277	5,281,244	7,919,889	68,769,360	168,966

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Electronics Manufacturing Facilities Reporting Only SIC 367*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	Zenith Electronics Corp., Melrose Park, Illinois	428,005
2	Toshiba Display Devices Inc., Horseheads, New York	280,598
3	IBM Corp., Hopewell Junction, New York	214,751
4	IBM Corp., Endicott, New York	113,500
5	Texas Instruments Inc., Dallas, Texas	76,185
6	Parker-Comerics Inc., Hudson, New Hampshire	71,000
7	Micron Tech. Inc., Boise, Idaho	67,955
8	NEC Electronics, Roseville, California	60,850
9	VLSI Tech. Inc., San Antonio, Texas	49,800
10	AT&T, Reading, Pennsylvania	46,855

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 367 or SIC 367 and Other SIC Codes*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	Zenith Electronics Corp., Melrose Park, Illinois	3674	428,005
2	Toshiba Display Devices Inc., Horseheads, New York	3674	280,598
3	IBM Corp., Hopewell Junction, New York	3674	214,751
4	Delco Electronics Corp., Kokomo, Indiana	3089, 3469, 3471, 3674, 3679, 3694	161,105
5	IBM Corp., Endicott, New York	3672, 3674, 3679	113,500
6	Texas Instruments Inc., Dallas, Texas	3674	76,185
7	Parker-Comerics Inc., Hudson, New Hampshire	3674	71,000
8	Micron Tech. Inc., Boise, Idaho	3674	67,955
9	NEC Electronics, Roseville, California	3674	60,850
10	VLSI Tech. Inc., San Antonio, Texas	3674	49,800

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Electronics and Computers (SICs 367) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	130	55%	4%	1%	47%	29%	5%	8%	8%
1995	156	47%	6%	2%	44%	30%	5%	8%	6%
1996	160	---	6%	2%	46%	28%	5%	9%	4%
1997	170	---	7%	2%	46%	28%	4%	9%	4%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Electronics and Computers Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	104	73	312	20	16	22	77%	23%	0.07
II	90	61	316	17	13	19	42%	58%	0.06
III	99	76	556	11	9	14	100%	0%	0.03
IV	235	200	1,414	10	45	93	95%	5%	0.07
V	296	189	837	21	25	39	74%	26%	0.05
VI	96	54	232	25	13	26	77%	23%	0.11
VII	81	67	399	12	6	7	29%	71%	0.02
VIII	29	20	106	16	6	9	67%	33%	0.08
IX	190	105	266	43	14	18	67%	33%	0.07
X	30	18	62	29	3	4	100%	0%	0.06
TOTAL	1,250	863	4,500	17	150	251	80%	20%	0.06

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Motor Vehicle Assembly

1995 TRI Releases for Motor Vehicle Facilities (SIC 371) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Xylene (Mixed Isomers)	197	2,280,326	21,483,874	761	0	0	23,764,961	120,634
Copper[M]	182	11,429	24,486	1,082	0	63,783	100,780	554
Toluene	180	1,332,844	4,405,560	1,000	0	0	5,739,404	31,886
Methyl Ethyl Ketone	156	1,527,741	3,567,338	260	0	0	5,095,339	32,662
Certain Glycol Ethers	137	1,421,172	8,522,207	2,910	0	0	9,946,289	72,601
Chromium[M]	135	22,674	195,066	664	0	8,307	226,711	1,679
Manganese[M]	123	15,345	30,711	1,432	0	755	48,243	392
Nickel[C, M]	123	12,494	15,321	578	0	7,108	35,501	289
Zinc Compounds[M]	122	83,412	11,958	3,682	0	24,525	123,577	1,013
Methanol	121	416,529	2,996,154	5	0	1,000	3,413,688	28,212
Phosphoric Acid	108	4,413	54,332	0	0	15,815	74,560	690
Ethylene Glycol	104	45,575	331,228	4,950	0	7,150	388,903	3,739
Methyl Isobutyl Ketone	93	653,579	6,071,907	5	0	0	6,725,491	72,317
N-butyl Alcohol	86	240,177	4,734,103	255	0	0	4,974,535	57,843
Ethylbenzene	77	284,165	2,738,099	755	0	0	3,023,019	39,260
Nickel Compounds[C, M]	65	2,296	1,542	294	0	260	4,392	68
Nitric Acid	64	11,082	30,622	120	0	0	41,824	654
Manganese Compounds[M]	63	8,918	3,134	351	0	250	12,653	201
Diisocyanates	62	15,407	53,889	0	0	0	69,296	1,118
Lead[C, M]	61	1,593	11,252	731	0	0	13,576	223
1,2,4-trimethylbenzene	60	446,894	2,021,989	255	0	0	2,469,138	41,152
Styrene[C]	60	840,901	1,567,292	5	0	53,608	2,461,806	41,030
Chromium Compounds[C, M]	56	5,240	14,404	856	0	781	21,281	380
Sodium Nitrite	55	18,854	18,222	304	0	0	37,380	680
Benzene[C]	46	9,722	18,330	0	0	0	28,052	610
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	45	25,073	917,866	0	0	0	942,939	20,954
Lead Compounds[C, M]	41	692	2,030	526	0	0	3,248	79
Nitrate Compounds	37	305	11,469	134,600	0	5	146,379	3,956
Trichloroethylene[C]	33	1,017,704	1,785,014	5	0	0	2,802,723	84,931
Methyl Tert-butyl Ether	31	44,074	26,353	0	0	0	70,427	2,272
Ammonia	30	58,961	256,172	30	0	0	315,163	10,505
N-hexane	29	115,502	92,999	0	0	0	208,501	7,190
Cyclohexane	28	18,288	59,077	0	0	0	77,365	2,763
Copper Compounds[M]	26	773	2,769	518	0	0	4,060	156
1,1,1-Trichloroethane[O]	25	676,197	923,051	0	0	0	1,599,248	63,970
Dichloromethane[C]	25	101,880	738,947	0	0	0	840,827	33,633
Sulfuric Acid	24	1,120	11,415	0	0	0	12,535	522
Phenol	22	28,105	245,531	5	0	63,418	337,059	15,321
Formaldehyde[C]	21	19,923	184,269	0	0	0	204,192	9,723
Barium Compounds[M]	19	220	695	66	0	50,989	51,970	2,735
N-methyl-2-pyrrolidone	19	57,870	366,531	0	0	0	424,401	22,337
Aluminum (Fume or Dust)[M]	17	37,326	420,653	5	0	250	458,234	26,955
Asbestos (Friable)[C]	16	262	2,192	0	0	0	2,454	153
1,1-dichloro-1-fluoroethane[O]	16	654,250	29,600	0	0	0	683,850	42,741
Di(2-ethylhexyl) Phthalate[C]	11	550	50,891	0	0	0	51,441	4,676
Cobalt[C, M]	11	1,014	274	250	0	0	1,538	140
Sodium Azide	10	755	34,065	200	0	255	35,275	3,528
Sec-butyl Alcohol	9	35,516	153,164	1,106	0	0	189,786	21,087
Diethanolamine	9	403	2,183	0	0	0	2,586	287
Tetrachloroethylene[C]	9	66,096	243,313	0	0	0	309,409	34,379
Zinc (Fume or Dust)[M]	9	4,472	7,722	250	0	0	12,444	1,383
Cyanide Compounds	6	11	515	9	0	0	535	89
Polychlorinated Alkanes	6	148	5	6,146	0	0	6,299	1,050
Cumene	6	9,513	37,104	0	0	0	46,617	7,770
Propylene	6	270	35	0	0	0	305	51
Chlorodifluoromethane[O]	5	4,699	157,000	0	0	0	161,699	32,340
Methyl Methacrylate	5	28,782	11,800	0	0	0	40,582	8,116
Chlorine	5	2,301	7	0	0	0	2,308	462
Antimony Compounds[M]	4	0	3	5	0	0	8	2
Antimony[M]	4	138	190	0	0	0	328	82

1995 TRI Releases for Motor Vehicle Facilities (SIC 371) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Hydrogen Fluoride	4	260	56,706	0	0	0	56,966	14,242
Toluene Diisocyanate (Mixed Isomers)[C]	4	6	280	0	0	0	286	72
Silver Compounds[M]	3	11	326	14	0	0	351	117
Freon 113[O]	3	27,060	7,400	0	0	0	34,460	11,487
Naphthalene	3	324	5,424	0	0	0	5,748	1,916
Triethylamine	3	18,529	14,250	0	0	0	32,779	10,926
Sodium Dimethyldithiocarbamate	3	5	0	0	0	0	5	2
Aluminum Oxide (Fibrous Forms)[M]	3	34	0	0	0	0	34	11
Dimethyl Phthalate	2	640	2,559	0	0	0	3,199	1,600
Toluene-2,4-Diisocyanate[C]	2	225	5	0	0	0	230	115
Barium[M]	2	250	14,478	255	0	0	14,983	7,492
Cadmium Compounds[C, M]	1	0	3	0	0	0	3	3
Urethane[C]	1	0	0	0	0	0	0	0
Formic Acid	1	0	0	0	0	0	0	0
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	1	1,632	18,775	0	0	0	20,407	20,407
Chloromethane	1	14,520	0	0	0	0	14,520	14,520
Vinyl Chloride[C]	1	250	24,000	0	0	0	24,250	24,250
Tert-butyl Alcohol	1	750	8,500	0	0	0	9,250	9,250
Dichlorodifluoromethane[O]	1	6,358	0	0	0	0	6,358	6,358
Dicyclopentadiene	1	0	31,000	0	0	0	31,000	31,000
4,4'-isopropylidenediphenol	1	0	5	0	0	0	5	5
Cumene Hydroperoxide	1	5	690	0	0	0	695	695
Toluene-2,6-diisocyanate[C]	1	0	1	0	0	0	1	1
M-xylene	1	0	54,400	0	0	0	54,400	54,400
Chlorobenzene	1	33,847	22,565	0	0	0	56,412	56,412
2-ethoxyethanol	1	7,500	1,400	0	0	0	8,900	8,900
Thiram	1	80	0	0	0	0	80	80
Butyl Acrylate	1	0	0	0	0	0	0	0
Vanadium (Fume or Dust)[M]	1	250	0	5	0	0	255	255
Phosphorus (Yellow or White)	1	250	0	5	0	0	255	255
	754**	12,838,766	65,979,747	165,255	0	298,259	79,282,027	105,149

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Motor Vehicle Facilities (SIC 371) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Xylene (Mixed Isomers)	197	25,310	357,302	14,883,252	772,870	4,191,627	20,230,361	102,692
Copper[M]	182	4,575	331,571	33,676,995	27,692	2,275	34,072,074	187,209
Toluene	180	3,780	11,933	2,793,394	126,046	1,517,676	4,452,829	24,738
Methyl Ethyl Ketone	156	945	1,081	2,681,876	119,690	1,840,656	4,644,248	29,771
Certain Glycol Ethers	137	2,284,337	50,451	789,895	264,106	697,045	4,086,084	29,825
Chromium[M]	135	2,829	335,751	15,282,853	30,201	618	15,652,252	115,943
Manganese[M]	123	4,058	661,808	10,950,734	2,902	94	11,619,596	94,468
Nickel[C, M]	123	8,728	148,122	8,659,470	6,464	727	8,823,511	71,736
Zinc Compounds[M]	122	55,023	2,011,519	5,527,984	380,909	5,084	7,980,519	65,414
Methanol	121	18,352	24,069	1,163,706	190,851	280,283	1,677,261	13,862
Phosphoric Acid	108	106,649	78,959	170,590	334,599	16	690,813	6,396
Ethylene Glycol	104	262,157	48,053	491,562	217,248	312,567	1,331,587	12,804
Methyl Isobutyl Ketone	93	10,356	13,643	9,303,182	116,465	955,733	10,399,379	111,821
N-butyl Alcohol	86	29,148	171,220	1,341,630	208,364	525,127	2,275,489	26,459
Ethylbenzene	77	1,936	9,035	2,770,686	196,660	858,495	3,836,812	49,829
Nickel Compounds[C, M]	65	18,040	207,340	1,548,767	127,570	11	1,901,728	29,257
Nitric Acid	64	64,265	340	575,900	248,650	.	889,155	13,893
Manganese Compounds[M]	63	31,587	283,517	2,393,275	22,637	276	2,731,292	43,354
Diisocyanates	62	0	36,043	34,050	289,961	17,426	377,480	6,088
Lead[C, M]	61	2,114	62,913	2,653,143	38,626	128	2,756,924	45,195
1,2,4-trimethylbenzene	60	260	2,421	493,624	15,075	222,251	733,631	12,227
Styrene[C]	60	0	842,620	5,193	4,392	56,611	908,816	15,147
Chromium Compounds[C, M]	56	5,607	328,359	1,102,558	109,989	2,627	1,549,140	27,663
Sodium Nitrite	55	734,616	119,541	254	294	.	854,705	15,540
Benzene[C]	46	162	260	599	756	5,758	7,535	164
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	45	33,150	7,060	.	5,050	.	45,260	1,006
Lead Compounds[C, M]	41	5,960	56,802	876,695	39,427	5,470	984,354	24,009
Nitrate Compounds	37	1,894,865	10,277	.	53,182	.	1,958,324	52,928
Trichloroethylene[C]	33	987	2,609	858,714	81,842	118,713	1,062,865	32,208
Methyl Tert-butyl Ether	31	0	.	.	1,022	4,173	5,195	168
Ammonia	30	80,500	.	.	1,771	.	82,271	2,742
N-hexane	29	0	.	3,880	1,900	48,296	54,076	1,865
Cyclohexane	28	0	.	250	500	725	1,475	53
Copper Compounds[M]	26	4,760	395,898	28,032,967	162,232	768	28,596,625	1,099,870
1,1,1-Trichloroethane[O]	25	11	30,100	272,002	2	14,465	316,580	12,663
Dichloromethane[C]	25	5	150	649,278	80,076	267,318	996,827	39,873
Sulfuric Acid	24	15,000	1,460	.	47,587	.	64,047	2,669
Phenol	22	14,213	93,469	.	1,868	11,711	121,261	5,512
Formaldehyde[C]	21	1,693	17,560	4,355	81	7,989	31,678	1,508
Barium Compounds[M]	19	1,109	128,570	16,374	16,949	3,664	166,666	8,772
N-methyl-2-pyrrolidone	19	1,485	2,451	408,867	5,998	313,237	732,038	38,528
Aluminum (Fume or Dust)[M]	17	255	64,455	4,908,592	250	.	4,973,552	292,562
Asbestos (Friable)[C]	16	0	2,083,200	.	5	.	2,083,205	130,200
1,1-dichloro-1-fluoroethane[O]	16	0	5	52,412	43,539	47,600	143,556	8,972
Di(2-ethylhexyl) Phthalate[C]	11	46	411	2,600	3,250	1,802	8,109	737
Cobalt[C, M]	11	0	2,310	1,541,899	5	.	1,544,214	140,383
Sodium Azide	10	980	133,587	522,915	3,911,454	1	4,568,937	456,894
Sec-butyl Alcohol	9	755	10,106	.	4,688	3,570	19,119	2,124
Diethanolamine	9	82,987	.	14,400	3,317	.	100,704	11,189
Tetrachloroethylene[C]	9	0	.	74,599	15,478	17,000	107,077	11,897
Zinc (Fume or Dust)[M]	9	505	15,160	520,763	256	.	536,684	59,632
Cyanide Compounds	6	42	70	1,802	19,102	.	21,016	3,503
Polychlorinated Alkanes	6	1,820	4,731	68,591	123,226	.	198,368	33,061
Cumene	6	/0	0	910	10	15,757	16,677	2,780
Propylene	6	0	.	.	.	.	0	0
Chlorodifluoromethane[O]	5	0	.	.	.	421	421	84
Methyl Methacrylate	5	0	.	2,100	80	11	2,191	438
Chlorine	5	17,000	.	.	.	.	17,000	3,400
Antimony Compounds[M]	4	253	19,978	.	250	.	20,481	5,120

1995 TRI Transfers for Motor Vehicle Facilities (SIC 371) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Antimony[M]	4	5	10	35,000	251	.	35,266	8,817
Hydrogen Fluoride	4	15,756	.	.	.	.	15,756	3,939
Toluene Diisocyanate (Mixed Isomers)[C]	4	0	255	.	562	.	817	204
Silver Compounds[M]	3	17	.	154,635	9,109	.	163,761	54,587
Freon 113[O]	3	0	.	1,667	400	.	2,067	689
Naphthalene	3	12	.	.	.	59	71	24
Triethylamine	3	0	16,000	.	9,000	.	25,000	8,333
Sodium Dimethyldithiocarbamate	3	250	24,000	.	.	.	24,250	8,083
Aluminum Oxide (Fibrous Forms)[M]	3	181	19,930	.	32,000	.	52,111	17,370
Dimethyl Phthalate	2	0	.	.	.	.	0	0
Toluene-2,4-Diisocyanate[C]	2	0	.	.	.	.	0	0
Barium[M]	2	250	.	.	2,571	.	2,821	1,411
Cadmium Compounds[C, M]	1	4	.	6,942	3	.	6,949	6,949
Urethane[C]	1	1,165	.	.	.	.	1,165	1,165
Formic Acid	1	0	.	.	.	.	0	0
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	1	0	.	.	3,722	663	4,385	4,385
Chloromethane	1	0	.	.	.	.	0	0
Vinyl Chloride[C]	1	0	.	.	.	.	0	0
Tert-butyl Alcohol	1	0	.	2,000	.	250	2,250	2,250
Dichlorodifluoromethane[O]	1	0	.	.	.	.	0	0
Dicyclopentadiene	1	0	.	.	2,160	.	2,160	2,160
4,4'-isopropylidenediphenol	1	0	.	.	9,120	.	9,120	9,120
Cumene Hydroperoxide	1	0	.	.	.	.	0	0
Toluene-2,6-diisocyanate[C]	1	0	.	.	.	.	0	0
M-xylene	1	0	.	.	4,600	.	4,600	4,600
Chlorobenzene	1	0	.	.	.	.	0	0
2-ethoxyethanol	1	250	250	.	.	250	750	750
Thiram	1	0	6,220	.	.	.	6,220	6,220
Butyl Acrylate	1	904	.	.	.	.	904	904
Vanadium (Fume or Dust)[M]	1	250	250	.	.	.	500	500
Phosphorus (Yellow or White)	1	250	250	.	.	.	500	500
	754**	5,852,509	9,285,455	158,330,381	8,550,912	12,377,024	194,425,497	257,859

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Motor Vehicle Facilities Reporting Only SIC 371*		
Rank	Facility[1]	Total TRI Releases in Pounds
1	Nissan Motor Mfg. Corp. USA, Smyrna, Tennessee	2,579,468
2	Ford Motor Co., Claycomo, Missouri	2,160,536
3	Ford Motor Co., Hazelwood,Missouri	2,056,688
4	Toyota Motor Mfg. Usa Inc., Georgetown, Kentucky	2,027,860
5	Ford Motor Co., Wayne, Michigan	1,904,922
6	MLCG Detroit/hamtramck, Detroit, Michigan	1,621,201
7	Honda of America Mfg. Inc., Marysville, Ohio	1,479,365
8	North American Truck Platforms, Roanoke, Indiana	1,399,561
9	Ford Motor Co., Louisville, Kentucky	1,338,189
10	Subaru-Isuzu Automotive Inc., Lafayette, Indiana	1,256,760

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 371 or SIC 371 and Other SIC Codes*			
Rank	Facility[1]	SIC Codes Reported in TRI	Total TRI Releases in Pounds
1	Nissan Motor Mfg. Corp. Usa, Smyrna, Tennessee	3711	2,579,468
2	Ford Motor Co., Claycomo, Missouri	3711	2,160,536
3	Ford Motor Co., Hazelwood, Missouri	3711	2,056,688
4	Toyota Motor Mfg. USA Inc., Georgetown, Kentucky	3711, 3714	2,027,860
5	Ford Motor Co., Wayne, Michigan	3711	1,904,922
6	MLCG Detroit/Hamtrack, Detroit, Michigan	3711	1,621,201
7	Honda of America Mfg. Inc., Marysville, Ohio	3711	1,479,365
8	North American Truck Platforms, Roanoke, Indiana	3711	1,399,561
9	Ford Motor Co., Louisville,Kentucky	3711	1,338,189
10	Subaru-Isuzu Automotive Inc., Lafayette, Indiana	3711	1,256,760

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Motor Vehicle Assembly (SIC 371) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	340	80%	13%	1%	9%	43%	4%	3%	30%
1995	349	79%	13%	1%	9%	46%	4%	4%	28%
1996	324	---	7%	1%	9%	50%	4%	5%	25%
1997	325	---	7%	1%	9%	50%	4%	4%	25%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity.*

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Motor Vehicle Assembly Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	58	45	254	14	22	45	53%	47%	0.18
II	32	27	139	14	11	30	83%	17%	0.22
III	73	60	1,252	3	19	30	93%	7%	0.02
IV	297	225	1,528	12	58	91	97%	3%	0.06
V	429	317	1,558	17	60	78	78%	22%	0.05
VI	103	74	337	18	23	41	83%	17%	0.12
VII	96	73	374	15	17	18	50%	50%	0.05
VIII	32	19	85	23	8	10	70%	30%	0.12
IX	90	49	219	25	25	58	93%	7%	0.26
X	50	38	166	18	10	12	67%	33%	0.07
TOTAL	1,260	927	5,912	13	253	413	82%	18%	0.07

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Shipbuilding and Repair

1995 TRI Releases for Shipbuilding and Repair Facilities (SIC 3731) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Xylene (Mixed Isomers)	30	853,863	99,379	9,292	0	0	962,534	32,084
N-butyl Alcohol	15	278,218	60,802	2,691	0	0	341,711	22,781
Copper Compounds[M]	8	91,410	0	3,968	0	250	95,628	11,954
Styrene[C]	8	7,209	87,069	250	0	0	94,528	11,816
Zinc Compounds[M]	6	75,417	27,278	2,920	0	250	105,865	17,644
Zinc (Fume or Dust)[M]	5	81,088	0	8,260	0	0	89,348	17,870
Chromium Compounds[C, M]	4	631	7,250	256	0	0	8,137	2,034
Methyl Ethyl Ketone	4	77,928	0	0	0	0	77,928	19,482
Toluene	4	25,806	30,239	0	0	0	56,045	14,011
Propylene	4	755	250	0	0	0	1,005	251
Nickel[C, M]	4	20	0	16	0	0	36	9
Copper[M]	4	20	0	261	0	0	281	70
Nickel Compounds[C, M]	3	30,592	0	294	0	250	31,136	10,379
Methanol	3	2,172	13,222	250	0	0	15,644	5,215
1,2,4-trimethylbenzene	3	42,399	18,100	0	0	0	60,499	20,166
Methyl Isobutyl Ketone	3	55,979	0	0	0	0	55,979	18,660
Manganese[M]	3	3,884	0	0	0	0	3,884	1,295
Chromium[M]	3	260	0	10	0	0	270	90
Lead Compounds[C, M]	2	546	0	261	0	250	1,057	529
Manganese Compounds[M]	2	620	0	250	0	250	1,120	560
Freon 113[O]	2	14,672	0	0	0	0	14,672	7,336
Ethylbenzene	2	16,993	1,159	0	0	0	18,152	9,076
Ethylene Glycol	2	256	26	0	0	0	282	141
Methyl Tert-butyl Ether	2	425	99,555	250	0	0	100,230	50,115
Barium Compounds[M]	1	3,600	0	0	0	0	3,600	3,600
Certain Glycol Ethers	1	22,000	5,000	0	0	0	27,000	27,000
Benzene[C]	1	426	84,999	0	0	0	85,425	85,425
1,1,1-Trichloroethane[O]	1	67,000	0	0	0	0	67,000	67,000
Dichloromethane[C]	1	8,400	0	0	0	0	8,400	8,400
Dichlorotetrafluoroethane (CFC-114)[O]	1	250	0	0	0	0	250	250
Dicyclopentadiene	1	18	6,072	0	0	0	6,090	6,090
Trichloroethylene[C]	1	15,600	0	0	0	0	15,600	15,600
Cumene	1	7	2,611	0	0	0	2,618	2,618
1,2-Dichloroethane[C]	1	31	2,634	0	0	0	2,665	2,665
Acrylonitrile[C]	1	250	5	250	0	0	505	505
N-hexane	1	57	11,608	0	0	0	11,665	11,665
2-ethoxyethanol	1	0	12,975	0	0	0	12,975	12,975
Cyclohexane	1	16	3,864	0	0	0	3,880	3,880
Lead[C, M]	1	0	0	0	0	0	0	0
	43**	1,778,818	574,097	29,479	0	1,250	2,383,644	55,434

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Shipbuilding and Repair Facilities (SIC 3731) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Xylene (Mixed Isomers)	30	250	35	223,254	14,020	407,986	645,545	21,518
N-butyl Alcohol	15	250	255	24,500	3,620	116,929	145,554	9,704
Copper Compounds[M]	8	1,525	3,878	647,200	44,700	.	697,303	87,163
Styrene[C]	8	0	2,835	118,127	2,420	30,837	154,219	19,277
Zinc Compounds[M]	6	1,950	2,828	.	36,028	.	40,806	6,801
Zinc (Fume or Dust)[M]	5	14	229,950	12,240	28,382	1,837	272,423	54,485
Chromium Compounds[C, M]	4	261	250	647,200	2,650	.	650,361	162,590
Methyl Ethyl Ketone	4	0	.	.	.	45,705	45,705	11,426
Toluene	4	0	15	.	20	15,745	15,780	3,945
Propylene	4	0	.	.	.	.	0	0
Nickel[C, M]	4	5	2,286	232,848	.	.	235,139	58,785
Copper[M]	4	5	3,678	251,005	.	.	254,688	63,672
Nickel Compounds[C, M]	3	251	.	.	7,000	.	7,251	2,417
Methanol	3	0	5	73,286	20	2,045	75,356	25,119
1,2,4-trimethylbenzene	3	0	.	.	.	33,883	33,883	11,294
Methyl Isobutyl Ketone	3	0	.	.	.	3,615	3,615	1,205
Manganese[M]	3	0	.	431,480	.	.	431,480	143,827
Chromium[M]	3	5	1,000	126,008	.	.	127,013	42,338
Lead Compounds[C, M]	2	251	900	1,064	3,244	.	5,459	2,730
Manganese Compounds[M]	2	0	.	.	.	.	0	0
Freon 113[O]	2	0	.	55,438	.	.	55,438	27,719
Ethylbenzene	2	0	15	.	20	7,214	7,249	3,625
Ethylene Glycol	2	250	5	.	20	.	275	138
Methyl Tert-butyl Ether	2	0	15	32,736	20	.	32,771	16,386
Barium Compounds[M]	1	0	.	.	100	.	100	100
Certain Glycol Ethers	1	0	.	.	.	22,000	22,000	22,000
Benzene[C]	1	0	15	.	20	.	35	35
1,1,1-Trichloroethane[O]	1	250	.	.	.	.	250	250
Dichloromethane[C]	1	0	.	.	.	21,500	21,500	21,500
Dichlorotetrafluoroethane[O]	1	0	.	.	.	.	0	0
Dicyclopentadiene	1	0	15	.	20	.	35	35
Trichloroethylene[C]	1	250	.	1,200	250	.	1,700	1,700
Cumene	1	0	5	.	20	.	25	25
1,2-Dichloroethane[C]	1	0	5	.	20	.	25	25
Acrylonitrile[C]	1	0	.	69,716	.	.	69,716	69,716
N-hexane	1	0	15	.	20	.	35	35
2-ethoxyethanol	1	0	.	.	.	200	200	200
Cyclohexane	1	0	5	.	20	.	25	25
Lead[C, M]	1	0	250	.	.	.	250	250
	43**	5,517	248,260	2,947,302	142,634	709,496	4,053,209	94,261

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

Ten Largest Volume TRI Releasing Shipbuilding and Repair Facilities Reporting Only SIC 3731*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	Newport News Shipbuilding - Newport News, VA	309,000
2	Atlantic Marine Inc. - Mobile, AL	268,670
3	Platzer Shipyard Inc. - Houston, TX	268,442
4	Norshipco - Norfolk, VA	229,000
5	Bethlehem Steel Corp.-Port Arthur, TX	133,020
6	Cascade General, Inc. - Portland, OR	116,929
7	Trinity Industries-Gulfport, MS	90,983
8	Todd Pacific Shipyards - Seattle, WA	85,081
9	Avondale Industries Inc. - Avondale, LA	84,650
10	Jeffboat - Jeffersonville, IN	82,108

Source: *US Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 3731 or SIC 3731 and Other SIC Codes*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	Ingalls Shipbuilding Inc. - Pascagoula, MS	3,731, 3441	723,560
2	Newport News Shipbuilding - Newport News, VA	3731	309,000
3	Atlantic Marine Inc. - Mobile, AL	3731	268,670
4	Platzer Shipyard Inc. - Houston, TX	3731	268,442
5	Norshipco - Norfolk, VA	3731	229,000
6	Gunderson Inc. - Portland, OR	3743, 3731	133,020
7	Bethlethem Steel Corp. - Port Arthur, TX	3731	116,929
8	Cascade General Inc. - Portland, OR	3731	90,983
9	Trinity Ind. - Gulfport, MS	3731	85,081
10	Todd Pacific Shipyards - Seattle, WA	3731	84,650

Source: *US Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities.*

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Shipbuilding and Repair Facilities (SIC 3731) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	5.32	113%	1.1%	0.0%	0.7%	36.1%	12.6%	3.6%	46%
1995	6.45	100%	0.5%	0.0%	0.7%	45.7%	11.2%	2.2%	44%
1996	5.62	---	0.7%	0.0%	0.7%	40.1%	11.3%	3.1%	44%
1997	5.59	---	0.8%	0.0%	0.7%	40.6%	11.1%	3.1%	44%

Source: *1995 Toxics Release Inventory Database.*

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Shipbuilding and Repair Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	6	6	34	11	4	6	83%	17%	0.18
II	0	0	0	--	0	0	0%	0%	--
III	6	5	66	5	1	1	100%	0%	0.02
IV	13	9	49	16	5	8	100%	0%	0.16
V	1	1	8	8	0	0	0%	0%	--
VI	13	12	72	11	8	14	79%	21%	0.19
VII	0	0	0	--	0	0	0%	0%	--
VIII	0	0	0	--	0	0	0%	0%	--
IX	2	1	6	20	0	0	0%	0%	--
X	3	3	8	23	2	3	67%	33%	0.38
TOTAL	44	37	243	9	20	32	84%	16%	0.13

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Ground Transportation

Five-Year Enforcement and Compliance Summary for the Ground Transportation Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	280	72	274	61	13	19	84%	16%	0.07
II	314	130	918	21	40	103	84%	16%	0.11
III	623	296	1,737	22	51	85	96%	4%	0.05
IV	1,268	602	2,464	31	63	110	89%	11%	0.04
V	673	317	1,416	29	26	43	47%	53%	0.03
VI	2,180	892	2,889	45	93	200	85%	15%	0.07
VII	880	453	1,661	32	28	46	76%	24%	0.03
VIII	642	201	518	74	11	48	90%	10%	0.09
IX	317	165	748	25	31	93	94%	6%	0.12
X	609	135	279	131	19	27	48%	52%	0.10
TOTAL	7,786	3,263	12,904	36	375	774	84%	16%	0.06

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Water Transportation

Five-Year Enforcement and Compliance Summary for the Water Transportation Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	26	2	8	195	1	1	100%	0%	0.13
II	51	12	201	15	5	20	45%	55%	0.10
III	54	12	61	53	1	1	100%	0%	0.02
IV	77	47	167	28	6	9	100%	0%	0.05
V	51	35	153	20	2	4	75%	25%	0.03
VI	94	34	118	48	14	22	73%	27%	0.19
VII	15	10	24	38	1	1	0%	100%	0.04
VIII	3	2	2	90	0	0	0%	0%	--
IX	9	6	22	25	0	0	0%	0%	--
X	134	32	60	134	6	12	33%	67%	0.20
TOTAL	514	192	816	38	36	70	61%	39%	0.09

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Air Transportation

Five-Year Enforcement and Compliance Summary for the Air Transportation Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	23	4	18	77	3	4	50%	50%	0.22
II	19	13	56	20	5	17	88%	12%	0.30
III	46	25	137	20	3	4	100%	0%	0.03
IV	132	95	402	20	16	37	100%	0%	0.09
V	23	15	89	16	4	8	50%	50%	0.09
VI	37	17	53	42	5	6	100%	0%	0.11
VII	31	13	58	32	1	2	0%	100%	0.03
VIII	21	9	14	90	2	4	100%	0%	0.29
IX	27	14	82	20	5	8	100%	0%	0.10
X	85	26	64	80	4	7	71%	29%	0.11
TOTAL	444	231	973	27	48	97	88%	12%	0.10

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Fossil Fuel Electric Power

Five-Year Enforcement and Compliance Summary for the Fossil Fuel Electric Power Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	250	140	664	23	36	55	84%	16%	0.08
II	269	199	1,455	11	75	187	84%	16%	0.13
III	305	221	1,997	9	57	130	87%	13%	0.07
IV	559	353	3,039	11	45	84	82%	18%	0.03
V	552	344	2,287	14	76	134	69%	31%	0.06
VI	315	222	1,079	18	30	61	54%	46%	0.06
VII	409	259	1,170	21	22	28	36%	64%	0.02
VIII	134	91	643	13	15	35	60%	40%	0.05
IX	273	251	1622	10	38	57	84%	16%	0.04
X	204	86	254	48	9	18	61%	39%	0.07
TOTAL	3,270	2,166	14,210	14	403	789	76%	24%	0.06

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

Dry Cleaning

Five-Year Enforcement and Compliance Summary for the Dry Cleaning Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	306	104	155	118	4	4	100%	0%	0.03
II	331	245	319	62	2	2	100%	0%	0.01
III	3,006	783	1,089	166	14	17	94%	6%	0.02
IV	724	355	851	51	27	34	100%	0%	0.04
V	239	101	217	66	3	3	100%	0%	0.01
VI	452	348	365	74	1	1	100%	0%	0
VII	235	77	237	59	2	3	33%	67%	0.01
VIII	438	271	437	60	2	2	100%	0%	0.00
IX	40	19	83	29	0	0	0%	0%	--
X	292	57	60	292	0	0	0%	0%	--
TOTAL	6,063	2,360	3,813	95	55	66	95%	5%	0.02

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.

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