

1999 Toxics Release Inventory Public Data Release

**U.S. Environmental Protection Agency
Office of Environmental Information (2810)
Washington, D.C. 20460**

1999 Toxics Release Inventory



Table of Contents

Executive Summary

Background	E-1
1999 Data Release	E-2
Total On-site and Off-site Releases, 1998–1999	E-3
Waste Management Data, 1998–1999	E-6
Total On-site and Off-site Releases 1988–1999	E-7
Understanding the Uses, Scope and Limits of TRI Data	E-10
Accessing the TRI Data	E-11

Executive Summary Exhibits

Table E-1. TRI On-site and Off-site Releases by Industry, Original and New Industries, 1999	E-2
Table E-2. TRI Total Releases by State, Original and New Industries, 1999	E-4
Table E-3. TRI Total Releases by Industry, Original and New Industries, 1998–1999 ...	E-5
Table E-4. Quantities of TRI Chemicals in Waste by Industry, Original and New Industries, 1999	E-6
Table E-5. Quantities of TRI Chemicals in Waste by Waste Management Activity, Original and New Industries, 1998–1999	E-8
Table E-6. Comparison of TRI On-site and Off-site Releases, Original Industries, 1988, 1995 and 1998–1999	E-9
Figure E-1. TRI Total Releases by Industry, Original and New Industries, 1999	E-3
Figure E-2. TRI Total Releases, Original and New Industries, 1998–1999	E-5
Figure E-3. TRI Total Production-related Waste Managed, Original and New Industries, 1999	E-7
Figure E-4. TRI Production-related Waste Managed, Original and New Industries, 1998–1999	E-8
Figure E-5. Distribution of TRI On-site and Off-site Releases, Original Industries, 1988–1999	E-10



1999 Toxics Release Inventory

Chapter 1 Toxics Release Inventory Reporting and the 1999 Public Data Release

Introduction	.1-1
1999 Public Data Release	.1-2
TRI Reporting	.1-2
Who Must Report?	.1-3
What Must Be Reported?	.1-3
How Do Facilities Report?	.1-5
Form R	.1-5
Form A	.1-5
What Are the Benefits and Limitations of the Data?	.1-6
Benefits	.1-6
Limitations	.1-7
TRI in Perspective	.1-8
Chemical Expansion	.1-8
Facility Expansion	.1-9
Persistent, Bioaccumulative Toxic Chemicals (PBTs)	.1-9
TRI Releases and Other Waste Management: Data Analyzed in 1999 TRI Public Data Report	.1-10
What to Consider When Using TRI Data	.1-10
Toxicity of the Chemical	.1-10
Exposure Considerations	.1-11
On- and Off-site Releases	.1-14
Waste Management	.1-18
Transfers Off-site for Further Waste Management	.1-21
Making Year-to-Year Comparisons of TRI Data	.1-21
1995-1999	.1-21
1991-1999	.1-21
1988-1999	.1-23
Reasons for Change	.1-23
Source Reduction	.1-23
How Can I Obtain Additional TRI Information?	.1-25

1999 Toxics Release Inventory



Chapter 1 Exhibits

Figure 1-1.	Information Collected Under TRI	1-13
Figure 1-2.	Waste Management Hierarchy	1-18
Box 1-1.	Who Must Report to TRI?	1-4
Box 1-2.	What Must Be Reported to TRI?	1-5
Box 1-3.	Factors to Consider in Using TRI Data	1-11
Box 1-4.	An Explanation of On-site Releases	1-14
Box 1-5.	An Explanation of Off-site Releases (Transfers Off-site to Disposal)	1-15
Box 1-6.	How Metals and Metal Compounds Should be Reported to TRI	1-15
Box 1-7.	Use of Data for Metals and Metal Compounds in This Report	1-17
Box 1-8.	Duplication of Off-site Transfers to Disposal	1-17
Box 1-9.	An Explanation of Waste Management Information	1-19
Box 1-10.	Differences between Amounts Reported in Sections 5 and 6 and in Section 8 of Form R	1-22
Box 1-11.	An Explanation of Transfers Off-site for Further Waste Management	1-22
Box 1-12.	Reasons Facility Estimates of Releases and Other Waste Management Change	1-24
Box 1-13.	What Is Source Reduction?	1-25

Chapter 2 Toxics Release Inventory Data Overview, 1998 and 1999

TRI Data for Original and New Industries, 1998 and 1999	2-1
On- and Off-site Releases	2-1
Waste Management Data	2-6
Quantities of TRI Chemicals in Waste	2-6
Transfers Off-site for Further Waste Management/Disposal	2-8
Projected Quantities of TRI Chemicals Managed in Waste, 1999-2001	2-9
Economic Overview, by Industry	2-11

Chapter 2 Exhibits

Table 2-1.	TRI On-site and Off-site Releases, Original and New Industries, 1998-1999 ..	2-2
------------	--	-----



1999 Toxics Release Inventory

Table 2-2.	Quantities of TRI Chemicals in Waste by Waste Management Activity, Original and New Industries, 1998-1999	2-6
Table 2-3.	TRI Off-site Transfers for Further Waste Management/Disposal, Original and New Industries, 1998-1999	2-9
Table 2-4.	Current Year and Projected Quantities of TRI Chemicals in Waste, Original and New Industries, 1999-2001	2-10
Table 2-5.	Employees and Sales (1997) and Total Production-related Waste (1999), by Industry	2-12
Figure 2-1.	Distribution of TRI On-site and Off-site Releases, Original Industries, 1999 ..	2-4
Figure 2-2.	Distribution of TRI On-site and Off-site Releases, New Industries, 1999	2-4
Box 2-1.	Duplication of Off-site Transfers to Disposal, 1998 and 1999	2-5

Chapter 3 1999 TRI Data and 1995-1999 Trends (Original Industries Only)

Introduction	3-1
TRI Releases, 1995-1999	3-2
On- and Off-site Releases	3-2
On-site Release	3-4
Off-site Releases	3-4
Waste Management Data, 1995-1999	3-6
Quantities of TRI Chemicals in Waste	3-6
Transfers Off-site for Further Waste Management and Disposal	3-7
TRI Data by State, 1995-1999	3-8
On- and Off-site Releases by State	3-8
On-site Releases	3-12
Off-site Releases	3-13
Transfers Within and Among States	3-18
Off-site Releases	3-18
Transfers Off-site for Further Waste Management	3-18
Management of TRI Chemicals in Waste by State	3-21
TRI Releases, 1988-1999	3-24
Source Reduction and Projections of TRI Chemicals in Waste	3-25
Source Reduction	3-25

1999 Toxics Release Inventory



Facility Projections of TRI Chemicals in Waste	3-26
--	------

Chapter 3 Exhibits

Table 3-1.	TRI Facilities and Forms, 1995 and 1998-1999, Original Industries	3-2
Table 3-2.	TRI On-site and Off-site Releases, 1995 and 1998-1999, Original Industries ..	3-3
Table 3-3.	Quantities of TRI Chemicals in Waste, 1995 and 1998-1999, Original Industries	3-5
Table 3-4.	TRI Transfers Off-site for Further Waste Management/Disposal, 1995 and 1998-1999, Original Industries	3-7
Table 3-5.	TRI On-site and Off-site Releases by State, 1995 and 1998-1999, Original Industries	3-9
Table 3-6.	TRI On-site and Off-site Releases by State, 1999, Original Industries	3-10
Table 3-7.	TRI Off-site Releases (Transfers Off-site to Disposal), 1999, Original Industries	3-14
Table 3-8.	TRI Releases in the State and Transferred Out of State, 1999, Original Industries	3-19
Table 3-9.	TRI Transfers Off-site for Further Waste Management Among and Within State, 1999, Original Industries	3-20
Table 3-10.	Quantities of TRI Chemicals in Waste by State, 1999, Original Industries ..	3-22
Table 3-11.	Comparison of TRI On-site and Off-site Releases, 1988, 1995 and 1998-1999, Original Industries	3-23
Table 3-12.	Facilities and Forms Reporting Source Reduction Activity, by Category, 1999, Original Industries	3-25
Table 3-13.	Current Year and Projected Quantities of TRI Chemicals in Waste, 1999-2001, Original Industries	3-27
Figure 3-1.	1999 TRI On-site Releases, Original Industries	3-4
Figure 3-2.	1999 TRI Off-site Releases, Original Industries	3-5
Figure 3-3.	1999 Quantities of TRI Chemicals in Waste, Original Industries	3-6
Figure 3-4.	1999 TRI Transfers Off-site for Further Waste Management/Disposal, Original Industries	3-7
Figure 3-5.	Distribution of TRI On-site and Off-site Releases, 1988-1999, Original Industries	3-24
Map 3-1.	TRI On-site Releases, 1999, Original Industries	3-12
Map 3-2.	TRI Production-related Waste Managed, 1999, Original Industries	3-21



1999 Toxics Release Inventory

Chapter 4 Toxics Release Inventory Data for New Industries and Federal Facilities, 1998–1999

New Industries	4-2
1998–1999 TRI Data	4-2
Total Releases by State	4-5

Metal Mining (SIC Code 10)

Introduction	4-9
1999 TRI Data for Metal Mining	4-10
On- and Off-site Releases	4-10
Waste Management Data	4-11
Quantities of TRI Chemicals in Waste	4-11
Transfers Off-site for Further Waste Management/Disposal	4-14
TRI Data by State	4-15
On- and Off-site Releases	4-15
Waste Management Data	4-17
Top 15 Chemicals for On- and Off-site Releases	4-18
Projected Quantities of TRI Chemicals Managed in Waste, 1999–2001	4-18
Source Reduction	4-19

Coal Mining (SIC Code 12)

Introduction	4-23
1999 TRI Data for Coal Mining	4-23
On- and Off-site Releases	4-23
Waste Management Data	4-26
Quantities of TRI Chemicals in Waste	4-26
Transfers Off-site for Further Waste Management/Disposal	4-27
TRI Data by State	4-28
On- and Off-site Releases	4-28
Waste Management Data	4-29
Top 15 Chemicals for On- and Off-site Releases	4-31

1999 Toxics Release Inventory



Projected Quantities of TRI Chemicals Managed in Waste, 1999–2001	4–32
Source Reduction	4–32

Electric Utilities That Combust Coal and/or Oil (SIC Codes 491 and 493)

Introduction	4–33
1999 TRI Data for Electric Utilities	4–34
On- and Off-site Releases	4–34
Waste Management Data	4–35
Quantities of TRI Chemicals in Waste	4–35
Transfers Off-site for Further Waste Management/Disposal	4–35
TRI Data by State	4–37
On- and Off-site Releases	4–37
Waste Management Data	4–39
Top 15 Chemicals for On- and Off-site Releases	4–42
Projected Quantities of TRI Chemicals Managed in Waste, 1999–2001	4–42
Source Reduction	4–45

Chemical Wholesale Distributors (SIC Code 5169)

Introduction	4–47
1999 TRI Data for Chemical Wholesale Distributors	4–47
On- and Off-site Releases	4–47
Waste Management Data	4–50
Quantities of TRI Chemicals in Waste	4–50
Transfers Off-site for Further Waste Management/Disposal	4–51
TRI Data by State	4–52
On- and Off-site Releases	4–52
Waste Management Data	4–53
Top 15 Chemicals for On- and Off-site Releases	4–57
Projected Quantities of TRI Chemicals Managed in Waste, 1999–2001	4–57
Source Reduction	4–58



1999 Toxics Release Inventory

Petroleum Terminals and Bulk Storage Facilities (SIC Code 5171)

Introduction	4-61
1999 TRI Data for Petroleum Terminals and Bulk Storage Facilities	4-61
On- and Off-site Releases	4-61
Waste Management Data	4-64
Quantities of TRI Chemicals in Waste	4-64
Transfers Off-site for Further Waste Management/Disposal	4-65
TRI Data by State	4-66
On- and Off-site Releases	4-66
Waste Management Data	4-67
Top 15 Chemicals for On- and Off-site Releases	4-71
Projected Quantities of TRI Chemicals Managed in Waste, 1999-2001	4-71
Source Reduction	4-71

RCRA Subtitle C Treatment, Storage and Disposal Facilities (in SIC Code 4953) and Solvent Recovery Facilities (in SIC Code 7389)

Introduction	4-75
1999 TRI Data for RCRA Subtitle C TSD and Solvent Recovery Facilities	4-76
On- and Off-site Releases	4-76
Waste Management Data	4-77
Quantities of TRI Chemicals in Waste	4-77
Transfers Off-site for Further Waste Management/Disposal	4-80
TRI Data by State	4-81
On- and Off-site Releases	4-82
Waste Management Data	4-83
Top 15 Chemicals for On- and Off-site Releases	4-83
Projected Quantities of TRI Chemicals Managed in Waste, 1999-2001	4-88
Source Reduction	4-89

Federal Facilities

Introduction	4-91
--------------------	------

1999 Toxics Release Inventory



1999 TRI Data for Federal Facilities	4-92
On- and Off-site Releases	4-92
Waste Management Data	4-95
Quantities of TRI Chemicals in Waste	4-95
Transfers Off-site for Further Waste Management/Disposal	4-96
Projected Quantities of TRI Chemicals Managed in Waste, 1999–2001	4-98
Source Reduction	4-98

Chapter 4 Exhibits

Table 4-1.	TRI On-site and Off-site Releases by Industry, Original and New Industries, 1999	4-3
Table 4-2.	TRI Forms and Total Releases by Industry, Original and New Industries, 1998–1999	4-4
Table 4-3.	Quantities of TRI Chemicals in Waste by Industry, Original and New Industries, 1999	4-5
Table 4-4.	TRI Transfers Off-site for Further Waste Management/Disposal by Industry, Original and New Industries, 1999	4-6
Table 4-5.	TRI Total Releases by State, Original and New Industries, 1999	4-7
Box 4-1.	SIC Codes and Their Use in TRI	4-1

Metal Mining (SIC Code 10) Exhibits

Table 4-6.	TRI On-site and Off-site Releases by 4-digit SIC Code, 1999: Metal Mining ..	4-10
Table 4-7.	TRI On-site and Off-site Releases, 1998–1999: Metal Mining	4-12
Table 4-8.	Quantities of TRI Chemicals in Waste by 4-digit SIC Code, 1999: Metal Mining	4-13
Table 4-9.	Quantities of TRI Chemicals in Waste, 1998–1999: Metal Mining	4-14
Table 4-10.	TRI Transfers Off-site for Further Waste Management/Disposal by 4-digit SIC Code, 1999: Metal Mining	4-14
Table 4-11.	TRI Transfers Off-site for Further Waste Management/Disposal, 1998–1999: Metal Mining	4-15
Table 4-12.	Summary of TRI Information by State, 1999: Metal Mining	4-16
Table 4-13.	TRI Total Releases by State, 1998–1999: Metal Mining	4-19



1999 Toxics Release Inventory

Table 4-14.	The 15 Chemicals with the Largest Total On-site and Off-site Releases, 1999: Metal Mining	4-20
Table 4-15.	Current Year and Projected Quantities of TRI Chemicals in Waste, 1999-2001: Metal Mining	4-21
Table 4-16.	Number of Forms Reporting Source Reduction Activity, 1999: Metal Mining	4-21
Figure 4-1.	Distribution of TRI On-site and Off-site Releases, 1999: Metal Mining	4-10
Figure 4-2.	TRI Waste Management, 1999: Metal Mining	4-13
Figure 4-3.	Distribution of TRI Transfers Off-site for Further Waste Management/Disposal, 1999: Metal Mining	4-15
Box 4-2.	SIC Code 10, Metal Mining: Codes and Classifications Required to Report to TRI	4-9
Map 4-1.	Total On-site and Off-site Releases, 1999: Metal Mining	4-18

Coal Mining (SIC Code 12) Exhibits

Table 4-17.	TRI On-site and Off-site Releases by 4-digit SIC Code, 1999: Coal Mining ..	4-24
Table 4-18.	TRI On-site and Off-site Releases, 1998-1999: Coal Mining	4-25
Table 4-19.	Quantities of TRI Chemicals in Waste by 4-digit SIC Code, 1999: Coal Mining	4-26
Table 4-20.	Quantities of TRI Chemicals in Waste, 1998-1999: Coal Mining	4-27
Table 4-21.	TRI Transfers Off-site for Further Waste Management/Disposal by 4-digit SIC Code, 1999: Coal Mining	4-27
Table 4-22.	TRI Transfers Off-site for Further Waste Management/Disposal, 1998-1999: Coal Mining	4-28
Table 4-23.	Summary of TRI Information by State, 1999: Coal Mining	4-28
Table 4-24.	TRI Total Releases by State, 1998-1999: Coal Mining	4-30
Table 4-25.	The 15 Chemicals with the Largest Total On-site and Off-site Releases, 1999: Coal Mining	4-31
Table 4-26.	Current Year and Projected Quantities of TRI Chemicals in Waste, 1999-2001: Coal Mining	4-32
Figure 4-4.	Distribution of TRI On-site and Off-site Releases, 1999: Coal Mining	4-24
Figure 4-5.	TRI Waste Management, 1999: Coal Mining	4-26
Box 4-3.	SIC Code 12, Coal Mining: Codes and Classifications Required to Report to TRI	4-23
Map 4-2.	Total On-site and Off-site Releases, 1999: Coal Mining	4-30

1999 Toxics Release Inventory



Electric Utilities That Combust Coal and/or Oil (SIC Codes 491 and 493) Exhibits

Table 4-27.	TRI On-site and Off-site Releases by 4-digit SIC Code, 1999: Electric Utilities	4-34
Table 4-28.	TRI On-site and Off-site Releases, 1998-1999: Electric Utilities	4-36
Table 4-29.	Quantities of TRI Chemicals in Waste by 4-digit SIC Code, 1999: Electric Utilities	4-37
Table 4-30.	Quantities of TRI Chemicals in Waste, 1998-1999: Electric Utilities	4-38
Table 4-31.	TRI Transfers Off-site for Further Waste Management/Disposal by 4-digit SIC Code, 1999: Electric Utilities	4-38
Table 4-32.	TRI Transfers Off-site for Further Waste Management/Disposal, 1998-1999: Electric Utilities	4-39
Table 4-33.	Summary of TRI Information by State, 1999: Electric Utilities	4-40
Table 4-34.	TRI Total Releases by State, 1998-1999: Electric Utilities	4-43
Table 4-35.	The 15 Chemicals with the Largest Total On-site and Off-site Releases, 1999: Electric Utilities	4-44
Table 4-36.	Current Year and Projected Quantities of TRI Chemicals in Waste, 1999-2001: Electric Utilities	4-45
Table 4-37.	Number of Forms Reporting Source Reduction Activity, 1999: Electric Utilities	4-46
Figure 4-6.	Distribution of TRI On-site and Off-site Releases, 1999: Electric Utilities . . .	4-34
Figure 4-7.	TRI Waste Management, 1999: Electric Utilities	4-37
Figure 4-8.	Distribution of TRI Transfers Off-site for Further Waste Management/Disposal, 1999: Electric Utilities	4-39
Box 4-4.	SIC Codes 493, Combination Electric and Gas, and Other Utility Services: Codes and Classifications Required to Report to TRI	4-33
Map 4-3.	Total On-site and Off-site Releases, 1999: Electric Utilities	4-42

Chemical Wholesale Distributors (SIC Code 5169) Exhibits

Table 4-38.	TRI On-site and Off-site Releases by 4-digit SIC Code, 1999: Chemical Wholesalers	4-48
Table 4-39.	TRI On-site and Off-site Releases, 1998-1999: Chemical Wholesalers	4-49
Table 4-40.	Quantities of TRI Chemicals in Waste by 4-digit SIC Code, 1999: Chemical Wholesalers	4-50
Table 4-41.	Quantities of TRI Chemicals in Waste, 1998-1999: Chemical Wholesalers . .	4-51



1999 Toxics Release Inventory

Table 4-42.	TRI Transfers Off-site for Further Waste Management/Disposal by 4-digit SIC Code, 1999: Chemical Wholesalers	4-51
Table 4-43.	TRI Transfers Off-site for Further Waste Management/Disposal, 1998-1999: Chemical Wholesalers	4-52
Table 4-44.	Summary of TRI Information by State, 1999: Chemical Wholesalers	4-54
Table 4-45.	TRI Total Releases by State, 1998-1999: Chemical Wholesalers	4-56
Table 4-46.	The 15 Chemicals with the Largest Total On-site and Off-site Releases, 1999: Chemical Wholesalers	4-58
Table 4-47.	Current Year and Projected Quantities of TRI Chemicals in Waste, 1999-2001: Chemical Wholesalers	4-59
Table 4-48.	Number of Forms Reporting Source Reduction Activity, 1999: Chemical Wholesalers	4-60
Figure 4-9.	Distribution of TRI On-site and Off-site Releases, 1999: Chemical Wholesalers	4-48
Figure 4-10.	TRI Waste Management, 1999: Chemical Wholesalers	4-50
Figure 4-11.	Distribution of TRI Transfers Off-site for Further Waste Management/Disposal, 1999: Chemical Wholesalers	4-52
Box 4-5.	SIC Code 516, Wholesale Trade—Chemicals and Allied Products: Codes and Classifications Required to Report to TRI	4-47
Map 4-4.	Total On-site and Off-site Releases, 1999: Chemical Wholesalers	4-53

Petroleum Terminals and Bulk Storage Facilities (SIC Code 5171) Exhibits

Table 4-49.	TRI On-site and Off-site Releases by 4-digit SIC Code, 1999: Petroleum Terminals and Bulk Storage Facilities	4-62
Table 4-50.	TRI On-site and Off-site Releases, 1998-1999: Petroleum Terminals and Bulk Storage Facilities	4-63
Table 4-51.	Quantities of TRI Chemicals in Waste by 4-digit SIC Code, 1999: Petroleum Terminals and Bulk Storage Facilities	4-64
Table 4-52.	Quantities of TRI Chemicals in Waste, 1998-1999: Petroleum Terminals and Bulk Storage Facilities	4-65
Table 4-53.	TRI Transfers Off-site for Further Waste Management/Disposal by 4-digit SIC Code, 1999: Petroleum Terminals and Bulk Storage Facilities ...	4-65
Table 4-54.	TRI Transfers Off-site for Further Waste Management/Disposal, 1998-1999: Petroleum Terminals and Bulk Storage Facilities	4-66
Table 4-55.	Summary of TRI Information by State, 1999: Petroleum Terminals and Bulk Storage Facilities	4-68

1999 Toxics Release Inventory



Table 4-56.	TRI Total Releases by State, 1998-1999: Petroleum Terminals and Bulk Storage Facilities	4-70
Table 4-57.	The 15 Chemicals with the Largest Total On-site and Off-site Releases, 1999: Petroleum Terminals and Bulk Storage Facilities	4-72
Table 4-58.	Current Year and Projected Quantities of TRI Chemicals in Waste, 1999-2001: Petroleum Terminals and Bulk Storage Facilities	4-73
Table 4-59.	Number of Forms Reporting Source Reduction Activity, 1999: Petroleum Terminals and Bulk Storage Facilities	4-73
Figure 4-12.	Distribution of TRI On-site and Off-site Releases, 1999: Petroleum Terminals and Bulk Storage Facilities	4-62
Figure 4-13.	TRI Waste Management, 1999: Petroleum Terminals and Bulk Storage Facilities	4-64
Figure 4-14.	Distribution of TRI Transfers Off-site for Further Waste Management/Disposal, 1999: Petroleum Terminals and Bulk Storage Facilities	4-66
Box 4-6.	SIC Code 517, Wholesale Trade-Petroleum and Petroleum Products: Codes and Classifications Required to Report to TRI	4-61
Map 4-5.	Total On-site and Off-site Releases, 1999: Petroleum Terminals and Bulk Storage Facilities	4-67

RCRA Subtitle C Treatment, Storage and Disposal Facilities (in SIC Code 4953) and Solvent Recovery Facilities (in SIC Code 7389) Exhibits

Table 4-60.	TRI On-site and Off-site Releases by 4-digit SIC Code, 1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-77
Table 4-61.	TRI On-site and Off-site Releases, 1998-1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-78
Table 4-62.	Quantities of TRI Chemicals in Waste by 4-digit SIC Code, 1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-79
Table 4-63.	Quantities of TRI Chemicals in Waste, 1998-1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-80
Table 4-64.	TRI Transfers Off-site for Further Waste Management/Disposal by 4-digit SIC Code, 1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-80
Table 4-65.	TRI Transfers Off-site for Further Waste Management/Disposal, 1998-1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-82
Table 4-66.	Summary of TRI Information by State, 1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-84



1999 Toxics Release Inventory

Table 4-67.	TRI Total Releases by State, 1998-1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-86
Table 4-68.	The 15 Chemicals with the Largest Total On-site and Off-site Releases, 1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-87
Table 4-69.	Current Year and Projected Quantities of TRI Chemicals in Waste, 1999-2001: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-88
Table 4-70.	Number of Forms Reporting Source Reduction Activity, 1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-89
Figure 4-15.	Distribution of TRI On-site and Off-site Releases, 1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-76
Figure 4-16.	TRI Waste Management, 1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-79
Figure 4-17.	Distribution of TRI Transfers Off-site for Further Waste Management/Disposal, 1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-81
Box 4-7.	SIC Codes 495, Sanitary Services, and 738, Miscellaneous Business Services: Codes and Classifications Required to Report to TRI	4-75
Map 4-6.	Total On-site and Off-site Releases, 1999: RCRA Subtitle C TSD and Solvent Recovery Facilities	4-83

Federal Facilities Exhibits

Table 4-71.	TRI On-site and Off-site Releases, 1999: Federal Facilities	4-93
Table 4-72.	TRI On-site and Off-site Releases, 1998-1999: Federal Facilities	4-94
Table 4-73.	Quantities of TRI Chemicals in Waste by 4-digit SIC Code, 1999: Federal Facilities	4-95
Table 4-74.	Quantities of TRI Chemicals in Waste, 1998-1999: Federal Facilities	4-97
Table 4-75.	TRI Transfers Off-site for Further Waste Management/Disposal, 1999: Federal Facilities	4-97
Table 4-76.	TRI Transfers Off-site for Further Waste Management/Disposal, 1998-1999: Federal Facilities	4-98
Table 4-77.	Current Year and Projected Quantities of TRI Chemicals in Waste, 1999-2001: Federal Facilities	4-99
Table 4-78.	Number of Forms Reporting Source Reduction Activity, 1999: Federal Facilities	4-100

1999 Toxics Release Inventory



Chapter 5 Toxics Release Inventory Data for Original Reporting Industries

TRI Data by Industry, 1999 .....	.5-1
On- and Off-site Releases, 1999 .....	.5-1
Top 20 Chemicals for On- and Off-site Releases .....	.5-5
Waste Management Data, 1999 .....	.5-8
Economic Overview, by Industry .....	.5-10
Year-by-Year Comparisons, by Industry .....	.5-13
On- and Off-site Releases, 1995-1999 .....	.5-14
On- and Off-site Releases, 1988 and 1995-1999 .....	.5-16
TRI Chemicals Managed in Waste, 2000-2001 Projected, 1995-1998, and 1991-1998 .....	.5-16
Projected Quantities of TRI Chemicals Managed in Waste, 2000-2001 .....	.5-16
Quantities of TRI Chemicals in Waste, 1995-1999 .....	.5-18
Quantities of TRI Chemicals in Waste, 1991 and 1995-1998 .....	.5-19
Economic Overview, by Industry, Multi-Year Comparisons .....	.5-22

Chapter 5 Exhibits

Table 5-1.	TRI Facilities and Forms, Original Industries, by Industry, 1999 .....	.5-5
Table 5-2.	TRI On-site and Off-site Releases, Original Industries, by Industry, 1999 ....	.5-6
Table 5-3.	Top 20 Chemicals with Largest Total On-site and Off-site Releases, Original Industries, 1999 .....	.5-10
Table 5-4.	Quantities of TRI Chemicals in Waste Managed, Original Industries, by Industry, 1999 .....	.5-12
Table 5-5.	Employees (1998), Shipments (1999) and Total Production-related Waste Managed (1999), by Industry .....	.5-14
Table 5-6.	TRI On-site and Off-site Releases, Original Industries, by Industry, 1995 and 1998-1999 .....	.5-15
Table 5-7.	TRI On-site and Off-site Releases, Original Industries, by Industry, 1988, 1995 and 1998-1999 .....	.5-17
Table 5-8.	Current Year and Projected Quantities of TRI Chemicals in Waste, Original Industries, by Industry, 1999-2001 .....	.5-19
Table 5-9.	Total Production-related Waste Managed, Original Industries, by Industry, 1995 and 1998-1999 .....	.5-20



1999 Toxics Release Inventory

Table 5-10.	Total Production-related Waste Managed, Original Industries, by Industry, 1991, 1995 and 1998-1999	5-21
Table 5-11.	Industrial Production Indexes by Industry, 1990-1999	5-23
Table 5-12.	Cumulative Change in Manufacturing Production and in TRI Quantities in Waste Managed, 1991-1999	5-23
Figure 5-1.	TRI On-site and Off-site Releases, Original Industries, by Industry, 1999	5-8
Figure 5-2.	Distribution of TRI On-site and Off-site Releases, Original Industries with Largest Totals, 1999	5-9
Figure 5-3.	Distribution of Quantities of TRI Chemicals in Waste Managed, Original Industries with Largest Totals, 1999	5-13
Box 5-1.	Standard Industrial Classification (SIC) Codes for the Original TRI Industries	5-2
Box 5-2.	Multiple SIC Codes and No SIC Codes	5-4

Appendices

Appendix A:	Chemical-specific TRI Release and Waste Management Data, 1988, 1995, 1998, and 1999	A-1
Appendix B:	TRI Release and Waste Management Data for Metals and Metal Compounds, 1999	B-1
Appendix C:	Basis of OSHA Carcinogen Listing for Individual Chemicals	C-1
Appendix D:	Public Access to the Toxics Release Inventory and Related Information	D-1
Appendix E:	EPA Regional Office and State TRI Contacts	E-1
Appendix F:	TRI Form R and Form A for 1999	F-1