## **CONTENTS**

	AND THE 1996 PUBLIC DATA RELEASE	1
Introduction	n	1
	ckground	
	Data Release	
	ed Analysis of 1996 Industry Data	
	Presentation of TRI Data	
	ns to 1996 TRI Public Data Release	
	ility of Screening Information Data Set (SIDS) Testing	
	ng Information System/LAN (SIS/L)	
	eally Catalogue	
	Sources	
	ing	
-	ust Report?	
	Sust Be Reported?	
	re the Benefits and Limitations of the Data?	
	refits	
	nitations	
	pansion	
	ı	
	se 1: Chemical Expansion	
	se 2: Facility Expansion	
	se 3: Chemical Use Reporting	
	porting Forms	
	m A	
	isions to Form R	
	TRI Modifications	
	ution Prevention Act Reporting	
	esign of TRI Reporting Forms and TRI Stakeholder Dialogue	
	sistent Bioaccumulators	
	ports Petition	
	and Gas Expansion	
	ional Aspects of TRI	
How Can I	Obtain Additional TRI Information?	17
	CHAPTER 1 EXHIBITS	
Box 1-1.	A Roadmap to the 1996 TRI Public Data Release	1
Box 1-2.	Who Reported Toxic Chemical Release Inventory Reports for the 1996	
	Reporting Year?	6
Box 1-3.	Who Will Report to TRI Starting in the 1998 Reporting Year?	
Box 1-4.	What Must Be Reported to TRI?	
	1	



Box 1-5.	Factors to Consider in Using TRI Data	9
Box 1-6.	Some Toxic Persistent Bioaccumulators Listed on the Toxics Release	
	Inventory	15
0114 DTED 0	NATIONAL OVERVIEW OF 4000 TOYIOO RELEASE	
CHAPTER 2	NATIONAL OVERVIEW OF 1996 TOXICS RELEASE INVENTORY	10
	IIIVEN I ON I	13
Introduct	ion	19
TRI F	Releases and Waste Management	19
What	to Consider When Using TRI Data	19
	oxicity of the Chemical	
Expos	sure Considerations	23
1996 Nat	ional Overview	24
On- a	nd Off-site Releases	25
Other	On-site Waste Management	25
Trans	fers Off-site for Further Waste Management	26
1996 TRI	Data by State	27
On- a	nd Off-site Releases	27
Other	On-site Waste Management	32
Trans	fers Off-site for Further Waste Management	32
1996 TRI	Data by Chemical	32
Top 20 (	Chemicals for On- and Off-site Releases	33
J	Jse, Toxicity, and Environmental Fate Information	33
Metal	s and Metal Compounds	36
OSHA	A Carcinogens	39
C	larification of the Basis for Carcinogen Listings on the EPCRA	
Se	ection 313 List of Toxic Chemicals	40
Chem	icals Affecting Children's Health	47
N	itrate Compounds and Children's Health	47
	lercury and Children's Health	
O	zone and Children's Health	49
Diffu	se Sources	49
Fe	ertilizer Use	50
Pe	esticide Use	51
Ve	olatile Organic Compounds	52
	Data for All TRI Chemicals	
Preventio	n and Management of TRI Chemicals in Waste	52
Waste	Management Information Collected	54
Sourc	e Reduction Activities	54
Quan	tities of TRI Chemicals in Waste	56
N	ational Overview	56
W	Vaste Management Data by State	58
C	hemical-Specific Waste Management Data	64
Chem	ical-Specific Data Table Information	65



## **CHAPTER 2 EXHIBITS**

Table 2-1.	1996 TRI Facilities and Forms	. 24
Table 2-2.	1996 TRI On-site and Off-site Releases	. 25
Table 2-3.	1996 Other On-site Waste Management	. 26
Table 2-4.	1996 TRI Transfers Off-site for Further Waste Management	
Table 2-5.	TRI On-site and Off-site Releases by State, 1996	. 28
Table 2-6.	Off-site Transfers for Disposal Sent Out of State, Within	
	States and Received into State, 1996	. 29
Table 2-7.	TRI Other On-site Waste Management by State, 1996	. 30
Table 2-8.	TRI Transfers Off-site for Further Waste Management by State, 1996	. 31
Table 2-9.	Top 20 Chemicals with Largest Total On-site and Off-site Releases, 1996	. 34
Table 2-10.	TRI On-site and Off-site Releases of Metals and Metal Compounds, 1996	. 37
Table 2-11.	TRI Other On-site Waste Management and Transfers Off-site for	
	Further Waste Management of Metals and Metal Compounds, 1996	. 39
Table 2-12.	TRI On-site and Off-site Releases of OSHA Carcinogens, 1996	. 43
Table 2-13.	TRI On-site and Off-site Releases for Developmental Toxins	
	Added to TRI for 1995 Reporting Year, Top 10 Chemicals	
	for Total Releases, 1996	. 48
Table 2-14.	Pesticide Use in Agricultural Crop Production, 1995, and TRI	
	Releases and Transfers of Selected Pesticides, 1996	. 51
Table 2-15.	TRI Air Emissions for Top 20 Volatile Organic Chemicals	
	with Largest Total Air Emissions, 1996	. 53
Table 2-16.	Facilities and Forms Reporting Source Reduction Activity,	
	by Category, 1996	. 57
Table 2-17.	Current Year, and Projected Quantities of TRI Chemicals in Waste,	
	1996-1998	
Table 2-18.	Quantities of TRI Chemicals in Waste, by State, 1996	. 59
Table 2-19.	Actual and Projected Quantities of TRI Chemicals in Waste, by State,	
T.11 2.20	1995-1998	. 60
Table 2-20.	Top 20 Chemicals with the Largest Total Production-related	_ =
T. 1.1. 2.21.4	Waste, 1996	
	TRI On-site and Off-site Releases, by Chemical, 1996	
Table 2-21B.	TRI Other On-site Waste Management and Transfers Off-site	
	for Further Waste Management, by Chemical, 1996	. 6/
Figure 2-1	Information Collected under TRI	. 20
Figure 2-2.	Distribution of TRI On-site and Off-site Releases, 1996	
Figure 2-3.	Distribution of TRI Other On-site Waste Management, 1996	
Figure 2-4.	Distribution of TRI Transfers Off-site for Further Waste	
C	Management, 1996	. 26
Figure 2-5.	Waste Management Hierarchy	
	•	
Box 2-1.	An Explanation of On- and Off-site Releases	. 21
Box 2-2.	An Explanation of On-site Waste Management	. 22



Box 2-3.	An Explanation of Transfers Off-site for Further Waste Management	22
Box 2-4.	Basis of OSHA Carcinogen Listing for Individual Chemicals	41
Box 2-5.	An Explanation of Waste Management Information	
Box 2-6.	What is Source Reduction?	56
CHAPTER 3	YEAR-TO-YEAR COMPARISON OF TOXICS RELEASE	07
	INVENTORY DATA	87
Introduction	on	87
"Core"	Chemicals for Year-to-Year Comparisons	88
199	95-1996 Comparisons	88
Mu	ılti-Year Comparisons	88
Re	porting of Ammonia, Hydrochloric Acid, and Sulfuric Acid	88
Th	reshold Changes	90
Un	derground Injection and On-site Land Releases	91
On	- and Off-site Waste Management	91
Ne	w Types of Off-site Transfers	91
	ns for Change	
TRI Data 1	for 1995-1996 and for 1988, 1994-1996	91
Nation	al Overview	91
On	- and Off-site Releases	91
Otl	ner On-site Waste Management	94
Tra	nnsfers Off-site for Further Waste Management	94
Fac	cilities and Forms	94
TRI Data l	by State for 1995-1996 and for 1988, 1994-1996	96
On- an	d Off-site Releases	96
TRI Data l	by Chemical for 1995-1996 and for 1988, 1994-1996	98
33/50	Program Chemicals, 1988-1996	100
Waste Mar	nagement Data, 1991-1995	100
Chemical-	Specific Data	103
	CHAPTER 3 EXHIBITS	
	OHAI TERO EXHIBITO	
Table 3-1.	Comparison of TRI On-site and Off-site Releases, Other On-site	
	Waste Management, and Transfers Off-site for Further Waste	
	Management, 1995-1996	93
Table 3-2.	<u> </u>	
	Waste Management, and Transfers Off-site for Further Waste	
	Management, 1988 and 1994-1996	95
Table 3-3.		
Table 3-4.	Change in Total TRI On-site and Off-site Releases, by State, 1998	
	and 1994-1996	99
Table 3-5.	Change in Total On- and Off-site Releases and Transfers Off-site to	
	Treatment and Disposal of 33/50 Chemicals,1988-1996	101



Table 3-6.	Total On-site Releases and Transfers Off-site to Treatment and	
	Disposal of 33/50 Program Chemicals Compared to Other TRI	101
Table 3-7.	Chemicals, 1988, 1990, 1995, and 1996	
Table 3-7.	Actual and Projected Quantities of TRI Chemicals in Waste,	102
1 able 3-6.	1991 and 1995-1998	103
Table 3-9.	TRI On-site and Off-site Releases, by Chemical, 1988 and 1994-1996	
Table 3-9.	TRI Other On-site Waste Management, Transfers Off-site for	101
ruore o y.	Further Waste Management, and Total Production-related Waste,	
	1988 and 1994-1996	105
Figure 3-1.	Distribution of TRI On-site and Off-site Releases, 1988-1996	96
Box 3-1.	An Explanation of the Modification to the Reporting Requirements	
DOX 3-1.	for Aqueous Ammonia and the Delisting of Ammonium Sulfate	
	(Solution) and Ammonium Nitrate (Solution)	80
Box 3-2.	An Explanation of the Modification to the Reporting Requirements	
BOX 3 2.	for Hydrochloric and Sulfuric Acid	90
Box 3-3.	Reasons Facility Release and Other Waste Management	> 0
	Estimates Change	92
II.	NVENTORY: OVERVIEW	155
•	Industry, 1996	
	Off-site Releases	
	n-site Waste Management	
	s Off-site for Further Waste Management	
	c Overview, by Industry, 1996	
	r Comparisons, by Industry	
	Off-site Releases, 1995-1996	
	Off-site Releases, 1988 and 1994-1996	
	nd Projected Quantities of TRI Chemicals in Waste, 1995-1998anagement Data, 1991 and 1995-1996	
	c Overview, by Industry, Multi-Year Comparisons	
LCOHOIIII	e Overview, by middsity, within-tear comparisons	10)
	CHAPTER 4 EXHIBITS	
Table 4-1.	CHAPTER 4 EXHIBITS  TRI Facilities and Forms, by Industry, 1996	159
Table 4-1. Table 4-2.		
	TRI Facilities and Forms, by Industry, 1996	159
Table 4-2.	TRI Facilities and Forms, by Industry, 1996 TRI On-site and Off-site Releases, by Industry, 1996	159



	Table 4-5.	Employees, Value of Shipments, and Total Production-related	
		Waste, by Industry, 1996	165
	Table 4-6.	Change in Total TRI On-site and Off-site Releases,	
		by Industry, 1995-1996	165
	Table 4-7.	Change in Total On-site and Off-site Releases, by Industry,	
		1988 and 1994-1996	167
	Table 4-8.	Actual and Projected Total Production-related Waste,	
		by Industry, 1996-1998	
	Table 4-9.	Total Production-related Waste, by Industry, 1991 and 1994-1996	
	Table 4-10.	Industrial Production Indexes by Industry, 1989-1996	169
	Table 4-11.	Cumulative Change in Manufacturing Production and in TRI	
		Releases and Transfers Off-site to Treatment and Disposal, 1989-1996	170
	Figure 4-1.	TRI On-site and Off-site Releases, Industries with Largest	
		Totals, 1996	160
	Figure 4-2.	TRI Other On-site Waste Management, Industries with	
		Largest Totals, 1996	162
	Figure 4-3.	TRI Transfers Off-site for Further Waste Management,	
		Industries with Largest Totals, 1996	164
	Box 4-1.	Standard Industrial Classification (SIC) Codes	156
	Box 4-2.	An Explanation of SIC Codes and TRI	158
СПА	PTER 5 TO		
		OXICS RELEASE INVENTORY DATA FOR PULP AND PAPER SIC CODE 26)	171
	(\$		
	A Look at th	SIC CODE 26)	171
	A Look at th Pulp, Pap	e Paper and Allied Products Industry (SIC Code 26)	171 171
	A Look at th Pulp, Pap Products	e Paper and Allied Products Industry (SIC Code 26)	171 171 173
	A Look at th Pulp, Pap Products Other Er	e Paper and Allied Products Industry (SIC Code 26)  per, and Paperboard  Made from Paper and Paperboard	171 171 173 174
	A Look at th Pulp, Pap Products Other Er 1996 TRI Da	e Paper and Allied Products Industry (SIC Code 26)  per, and Paperboard  Made from Paper and Paperboard  avironmental Developments	171 171 173 174 175
	A Look at th Pulp, Pap Products Other Er 1996 TRI Da On- and	e Paper and Allied Products Industry (SIC Code 26)  per, and Paperboard  Made from Paper and Paperboard  nvironmental Developments  ata for Pulp and Paper	171 171 173 174 175 176
	A Look at th Pulp, Pap Products Other Er 1996 TRI Da On- and Other Or	e Paper and Allied Products Industry (SIC Code 26)  per, and Paperboard  Made from Paper and Paperboard  avironmental Developments  ata for Pulp and Paper  Off-site Releases	171 171 173 174 175 176
	A Look at the Pulp, Paper Products Other Er 1996 TRI Da On- and Other Or Transfers	e Paper and Allied Products Industry (SIC Code 26) per, and Paperboard Made from Paper and Paperboard nvironmental Developments ata for Pulp and Paper Off-site Releases n-site Waste Management	171 171 173 174 175 176 177
	A Look at the Pulp, Paper Products Other Er 1996 TRI Da On- and Other Or Transfers 1996 TRI Da 1996 TR	e Paper and Allied Products Industry (SIC Code 26)  per, and Paperboard  Made from Paper and Paperboard  nvironmental Developments  ata for Pulp and Paper  Off-site Releases  n-site Waste Management  s Off-site for Further Waste Management	171 171 173 174 175 176 177 179
	A Look at the Pulp, Paper Products Other Erron 1996 TRI Date Of Transfers 1996 TRI Date 1996 TRI Dat	e Paper and Allied Products Industry (SIC Code 26)  per, and Paperboard  Made from Paper and Paperboard  vironmental Developments  ata for Pulp and Paper  Off-site Releases  n-site Waste Management  sta by State for Pulp and Paper	171 171 173 174 175 176 177 179 180 181
	A Look at the Pulp, Paper Products Other Er 1996 TRI Da On- and Other Or Transfers 1996 TRI Da OSHA COSHA COSHA COSHA COSHA Costa Co	e Paper and Allied Products Industry (SIC Code 26)  per, and Paperboard  Made from Paper and Paperboard  nvironmental Developments  ata for Pulp and Paper  Off-site Releases  n-site Waste Management  sta by State for Pulp and Paper  ata by Chemical for Pulp and Paper	171 173 174 175 176 177 179 180 181
	A Look at the Pulp, Paper Products Other Er 1996 TRI Da On- and Other Or Transfers 1996 TRI Da OSHA COSHA CO	e Paper and Allied Products Industry (SIC Code 26)  per, and Paperboard  Made from Paper and Paperboard  avironmental Developments  ata for Pulp and Paper  Off-site Releases  n-site Waste Management  s Off-site for Further Waste Management  ata by State for Pulp and Paper  ata by Chemical for Pulp and Paper  Carcinogens	171 171 173 174 175 176 177 180 181 184 186
	A Look at the Pulp, Paper Products Other Er 1996 TRI Da On- and Other Or Transfers 1996 TRI Da OSHA COSHA CO	e Paper and Allied Products Industry (SIC Code 26)  ber, and Paperboard  Made from Paper and Paperboard  vironmental Developments  ata for Pulp and Paper  Off-site Releases  n-site Waste Management  ata by State for Further Waste Management  ata by Chemical for Pulp and Paper  Carcinogens  nemicals in Waste for Pulp and Paper  d Quantities of TRI Chemicals in Waste  deduction Activity	171 173 174 175 176 177 180 181 184 186 186
	A Look at the Pulp, Paper Products Other Err 1996 TRI Date Of Transfers 1996 TRI Date OSHA COMPANDE TRI CHE Projected Source Research Source Research Programmer Projected Source Research Programmer Projected Source Research Projected Researc	e Paper and Allied Products Industry (SIC Code 26)  per, and Paperboard  Made from Paper and Paperboard  nvironmental Developments  ata for Pulp and Paper  Off-site Releases  n-site Waste Management  ata by State for Pulp and Paper  ata by Chemical for Pulp and Paper  Carcinogens  nemicals in Waste for Pulp and Paper  I Quantities of TRI Chemicals in Waste  Reduction Activity  Comparisons for Pulp and Paper	171 171 173 174 175 176 177 180 181 184 186 186 187 190
	A Look at the Pulp, Paper Products Other Er 1996 TRI Da On- and Other Or Transfers 1996 TRI Da OSHA COSHA CO	e Paper and Allied Products Industry (SIC Code 26)  per, and Paperboard Made from Paper and Paperboard  invironmental Developments  ata for Pulp and Paper  Off-site Releases  in-site Waste Management  ata by State for Further Waste Management  ata by Chemical for Pulp and Paper  Carcinogens  inemicals in Waste for Pulp and Paper  I Quantities of TRI Chemicals in Waste  deduction Activity  Comparisons for Pulp and Paper  Of TRI Data for Pulp and Paper	171 173 174 175 176 177 180 181 184 186 186 187 190 190
	A Look at the Pulp, Paper Products Other Er 1996 TRI Da On- and Other Or Transfers 1996 TRI Da OSHA COSHA CO	e Paper and Allied Products Industry (SIC Code 26)  per, and Paperboard  Made from Paper and Paperboard  nvironmental Developments  ata for Pulp and Paper  Off-site Releases  n-site Waste Management  ata by State for Pulp and Paper  ata by Chemical for Pulp and Paper  Carcinogens  nemicals in Waste for Pulp and Paper  I Quantities of TRI Chemicals in Waste  Reduction Activity  Comparisons for Pulp and Paper	171 173 174 175 176 177 180 181 186 186 187 190 190



Trans	sfers Off-site for Further Waste Management	190
1988-199	96 TRI Data for Pulp and Paper	190
Changes	in SIC Codes	192
1988	-1996 Data for Four-Digit Industries in Pulp and Paper	194
	ities with Large Increases and Decreases in Releases, 1988-1996	
	96 Waste Management Data for Pulp and Paper	
	ities with Large Increases and Decreases in Waste	
	agement, 1991-1996	202
	CHAPTER 5 EXHIBITS	
Table 5-1.	Summary of TRI Information by 4-digit SIC Code, 1996:	
	Pulp and Paper, SIC Code 26	
Table 5-2.	Multiple SIC Codes, 1996: Pulp and Paper, SIC Code 26	176
Table 5-3.	TRI On-site and Off-site Releases, 1996: Pulp and Paper,	
	SIC Code 26 (in Rank Order)	177
Table 5-4.	TRI Other On-site Waste Management, 1996: Pulp and Paper,	
	SIC Code 26 (in Rank Order)	178
Table 5-5.	TRI Transfers Off-site for Further Waste Management, 1996:	
	Pulp and Paper, SIC Code 26 (in Rank Order)	180
Table 5-6.	Summary of TRI Information by State, 1996: Pulp and Paper,	
	SIC Code 26	182
Table 5-7.	The 15 Chemicals with the Largest Total On-site and Off-site Releases,	
	1996: Pulp and Paper, SIC Code 26 (in Rank Order)	184
Table 5-8.	TRI On-site and Off-site Releases of OSHA Carcinogens by	
	4-digit SIC Code, 1996: Pulp and Paper, SIC Code 26 (in Rank Order).	185
Table 5-9.	Quantities of TRI Chemicals in Waste by 4-digit SIC Code, 1996:	
	Pulp and Paper, SIC Code 26 (in Rank Order)	186
Table 5-10.	Current Year and Projected Quantities of TRI Chemicals in Waste,	
	1996-1998: Pulp and Paper, SIC Code 26	188
Table 5-11.	Number of Forms Reporting Source Reduction Activity, 1996:	
	Pulp and Paper, SIC Code 26	189
Table 5-12.	Comparison of TRI On-site and Off-site Releases, Other On-site	
	Waste Management, and Transfers Off-site for Further Waste	
	Management, 1995-1996: Pulp and Paper, SIC Code 26	191
Table 5-13.	Comparison of TRI On-site and Off-site Releases, Other On-site	
	Waste Management, and Transfers Off-site for Further	
	Waste Management, 1988 and 1994-1996: Pulp and Paper,	
	SIC Code 26	193
Table 5-14.	TRI On-site and Off-site Releases by 4-digit SIC Code, 1988	
	and 1994-1996: Pulp and Paper, SIC Code 26	195
Table 5-15.	TRI Other On-site Waste Management by 4-digit SIC Code,	
	1988 and 1994-1996: Pulp and Paper, SIC Code 26	197



	Table 5-16.	TRI Transfers Off-site for Further Waste Management by 4-digit	100
	Table 5 17	SIC Code, 1988 and 1994-1996: Pulp and Paper, SIC Code 26	199
	Table 5-17.	TRI Waste Management Data, 1991, 1994-1996: Pulp and Paper, SIC Code 26	203
	Figure 5-1.	Distribution of TRI On-site and Off-site Releases, 1996:	
		Pulp and Paper (SIC Code 26)	177
	Figure 5-2.	TRI On-site and Off-site Releases, SIC Codes with Largest	450
	F: 7.0	Releases, 1996: Pulp and Paper (SIC Code 26)	178
	Figure 5-3.	Distribution of TRI Other On-site Waste Management, 1996:	170
	F: 5.4	Pulp and Paper (SIC Code 26)	179
	Figure 5-4.	TRI Other On-site Waste Management, SIC Codes with	170
	F: 5.5	Largest Totals, 1996: Pulp and Paper (SIC Code 26)	179
	Figure 5-5.	Distribution of TRI Transfers Off-site for Further Waste	100
	Einen F.	Management, 1996: Pulp and Paper (SIC Code 26)	180
	Figure 5-6.	TRI Transfers Off-site for Further Waste Management,	101
	Eigung 5.7	SIC Codes with Largest Totals, 1996: Pulp and Paper (SIC Code 26)	181
	Figure 5-7.	TRI On-site and Off-site Releases of OSHA Carcinogens, SIC Codes with Largest Totals, 1996: Pulp and Paper (SIC Code 26)	105
	Eiguro 5 9	Distribution of TRI Production-related Waste, 1996:	163
	Figure 5-8.	Pulp and Paper (SIC Code 26)	197
	Figure 5-9.	Distribution of Production-related Waste, 1996:	107
	rigule 3-9.	Pulp and Paper (SIC Code 26)	187
	Figure 5-10.	Projected Changes in Quantities of TRI Chemicals in Waste,	107
	rigure 5 10.	1996-1998: Pulp and Paper (SIC Code 26)	189
	Figure 5-11.	Percentage Change in On-site and Off-site Releases, 1995-1996:	107
	riguie 5 11.	Pulp and Paper (SIC Code 26)	192
	Figure 5-12.		1,2
	115010 5 12.	Pulp and Paper (SIC Code 26)	194
	Figure 5-13.	Percentage Change in Quantities of TRI Chemicals in Waste,	
	8	1991-1996: Pulp and Paper (SIC Code 26)	204
	Box 5-1.	SIC Code 26, Paper and Allied Products: Codes and Classifications	172
	Map 5-1.	Total On- and Off-site Releases, 1996: Pulp and Paper, SIC Code 26	183
CHAF	=	OXICS RELEASE INVENTORY DATA FOR CHEMICAL ANUFACTURING (SIC CODE 28)	207
	•••	(G ,	<b> ·</b>
		e Chemicals and Allied Products Industry (SIC Code 28)	
		Organic Chemicals	
		Materials and Synthetics	
		d Pharmaceuticals	
	1996 TRI Da	ta for Chemical Manufacturing	211



Multiple	Codes within SIC Code 28	215
On- and	Off-site Releases	216
Other O	n-site Waste Management	217
Transfer	rs Off-site for Further Waste Management	218
1996 TRI D	ata by State for Chemical Manufacturing	218
1996 TRI D	ata by Chemical for Chemical Manufacturing	222
OSHA (	Carcinogens	225
1996 TRI C	hemicals in Waste for Chemical Manufacturing	226
Projecte	d Quantities of TRI Chemicals in Waste	229
Source I	Reduction Activity	230
Year-to-Yea	r Comparisons for Chemical Manufacturing	231
1995-19	96 TRI Data for Chemical Manufacturing	231
On-	and Off-site Releases	231
Othe	er On-site Waste Management	233
Tran	sfers Off-site for Further Waste Management	233
1988-19	96 TRI Data for Chemical Manufacturing	233
Char	nges in SIC Codes	234
1988-19	96 Data for Four-Digit Industries in Chemical Manufacturing	234
On-	and Off-site Releases	236
Othe	er On-site Waste Management	236
Tran	sfers Off-site for Further Waste Management	245
Faci	lities with Large Increases and Decreases in Releases, 1988-1996	246
1991-19	96 Waste Management Data for Chemical Manufacturing	247
Facil	lities with Large Increases and Decreases in Waste	
Man	agement, 1991-1996	249
Sources		252
	CHAPTER 6 EXHIBITS	
Table 6-1.	Summary of TRI Information by 4-digit SIC Code, 1996:	
	Chemical Manufacturing, SIC Code 28	212
Table 6-2.	Multiple SIC Codes, 1996: Chemical Manufacturing, SIC Code 28	
Table 6-3.	TRI On-site and Off-site Releases, 1996: Chemical Manufacturing,	
	SIC Code 28 (in Rank Order)	216
Table 6-4.	TRI Other On-site Waste Management, 1996: Chemical Manufacturing,	
	SIC Code 28 (in Rank Order)	
Table 6-5.	TRI Transfers Off-site for Further Waste Management, 1996:	
	Chemical Manufacturing, SIC Code 28 (in Rank Order)	221
Table 6-6.	Summary of TRI Information by State, 1996: Chemical	_
	Manufacturing, SIC Code 28	223
Table 6-7.	The 15 Chemicals with the Largest Total On-site and Off-site	
	Releases, 1996: Chemical Manufacturing, SIC Code 28 (in Rank Order)	225



Table 6-8.	TRI On-site and Off-site Releases of OSHA Carcinogens by 4-digit SIC Code, 1996: Chemical Manufacturing, SIC Code 28	
	(in Rank Order)	. 226
Table 6-9.	Quantities of TRI Chemicals in Waste by 4-digit SIC Code, 1996:	
	Chemical Manufacturing, SIC Code 28 (in Rank Order)	. 227
Table 6-10.	Current Year and Projected Quantities of TRI Chemicals in Waste,	
	1996-1998: Chemical Manufacturing, SIC Code 28	. 229
Table 6-11.	Number of Forms Reporting Source Reduction Activity, 1996:	
	Chemical Manufacturing, SIC Code 28	. 231
Table 6-12.	Comparison of TRI On-site and Off-site Releases, Other On-site	
	Waste Management, and Transfers Off-site for Further Waste	
	Management, 1995-1996: Chemical Manufacturing, SIC Code 28	. 232
Table 6-13.	Comparison of TRI On-site and Off-site Releases, Other	
	On-site Waste Management, and Transfers Off-site for Further	
	Waste Management, 1988 and 1994-1996: Chemical Manufacturing,	
	SIC Code 28	. 235
Table 6-14.	TRI On-site and Off-site Releases by 4-digit SIC Code,	
	1988 and 1994-1996: Chemical Manufacturing, SIC Code 28	. 237
Table 6-15.	TRI Other On-site Waste Management by 4-digit SIC Code,	
	1988 and 1994-1996: Chemical Manufacturing, SIC Code 28	. 240
Table 6-16.	TRI Transfers Off-site for Further Waste Management by 4-digit	
14010 0 101	SIC Code, 1988 and 1994-1996: Chemical Manufacturing,	
	SIC Code 28	243
Table 6-17.	TRI Waste Management Data, 1991, 1994-1996:	. 2 13
14010 0 17.	Chemical Manufacturing, SIC Code 28	248
	Chemical Managactaring, 210 0000 20	. 2 .0
Figure 6-1.	Distribution of TRI On-site and Off-site Releases, 1996:	
8	Chemical Manufacturing (SIC Code 28)	. 217
Figure 6-2.	TRI On-site and Off-site Releases, SIC Codes with Largest	
118010 0 2.	Releases, 1996: Chemical Manufacturing (SIC Code 28)	218
Figure 6-3.	Distribution of TRI Other On-site Waste Management, 1996:	. 210
rigare o s.	Chemical Manufacturing (SIC Code 28)	220
Figure 6-4.	TRI Other On-site Waste Management, SIC Codes with	. 220
Tiguic 0 4.	Largest Totals, 1996: Chemical Manufacturing (SIC Code 28)	220
Figure 6-5.	Distribution of TRI Transfers Off-site for Further Waste	. 220
rigure 0-3.	Management, 1996: Chemical Manufacturing (SIC Code 28)	222
Figure 6-6.	TRI Transfer Off-site for Further Waste Management,	. 222
riguic 0-0.	SIC Codes with Largest Totals, 1996: Chemical Manufacturing	
	(SIC Code 28)	222
Figure 6.7	TRI On-site and Off-site Releases of OSHA Carcinogens,	. 222
Figure 6-7.		
	SIC Codes with Largest Totals, 1996: Chemical Manufacturing	227
Eigung 6 0	(SIC Code 28)	. 227
Figure 6-8.	Distribution of TRI Production-related Waste, 1996:	220
	Chemical Manufacturing (SIC Code 28)	. 228



Figure 6-9.	Distribution of Production-related Waste, 1996: Chemical	220
Eigung 6 10	Manufacturing (SIC Code 28)	228
Figure 6-10.	Projected Percentage Changes in Quantities of TRI Chemicals in Waste, 1996–1998: Chemical Manufacturing (SIC Code 28)	220
Figure 6 11	Percentage Change in On-site and Off-site Releases, 1995-1996:	230
Figure 6-11.	Chemical Manufacturing (SIC Code 28)	222
Figure 6-12.	Percentage Change in On-site and Off-site Releases, 1988-1996:	233
rigule 0-12.	Chemical Manufacturing (SIC Code 28)	236
Figure 6-13.	Percentage Change in Quantities of TRI Chemicals in Waste,	230
riguic 0-13.	1991-1996: Chemical Manufacturing (SIC Code 28)	249
	1771 1770. Chemical Manufacturing (SIC Code 20)	, <u>2</u> 47
Box 6-1.	SIC Code 28, Chemicals and Allied Products: Codes and Classification	ns 208
Map 6-1.	Total On- and Off-site Releases, 1996: Chemical Manufacturing,	
<b>r</b>	SIC Code 28	224
CHAPTER 7 TO	OXICS RELEASE INVENTORY DATA FOR PETROLEUM	
	EFINING (SIC CODE 29)	253
A Look at the	Petroleum Refining and Related Industries (SIC Code 29)	253
	Data for Petroleum Refining	
	Off-site Releases	
	-site Waste Management	
	Off-site for Further Waste Management	
	ta by State for Petroleum Refining	
	ta by Chemical for Petroleum Refining	
	arcinogens	
1996 TRI Ch	emicals in Waste for Petroleum Refining	266
Projected	Quantities of TRI Chemicals in Waste	267
Source Re	eduction Activity	270
Year-to-Year	Comparisons for Petroleum Refining	270
1995-199	6 TRI Data for Petroleum Refining	270
On- a	nd Off-site Releases	270
Other	On-site Waste Management	270
	fers Off-site for Further Waste Management	
	6 TRI Data for Petroleum Refining	
	1996 Data for Four-Digit Industries in Petroleum Refining	
	6 Waste Management Data for Petroleum Refining	279
	ties with Large Increases and Decreases in Waste Management,	270
	1996	
Sources		283



## **CHAPTER 7 EXHIBITS**

Table 7-1.	Summary of TRI Information by 4-digit SIC Code, 1996:	
	Petroleum Refining, SIC Code 29	256
Table 7-2.	Multiple SIC Codes, 1996: Petroleum Refining, SIC Code 29	256
Table 7-3.	TRI On-site and Off-site Releases, 1996: Petroleum Refining,	
	SIC Code 29 (in Rank Order)	256
Table 7-4.	TRI Other On-site Waste Management, 1996: Petroleum Refining,	
	SIC Code 29 (in Rank Order)	258
Table 7-5.	TRI Transfers Off-site for Further Waste Management, 1996:	
	Petroleum Refining, SIC Code 29 (in Rank Order)	260
Table 7-6.	Summary of TRI Information by State, 1996: Petroleum Refining,	
	SIC Code 29	262
Table 7-7.	The 15 Chemicals with the Largest Total On-site and Off-site	
10010 / /.	Releases, 1996: Petroleum Refining, SIC Code 29 (in Rank Order)	264
Table 7-8.	TRI On-site and Off-site Releases of OSHA Carcinogens by	20 .
14010 7 0.	4-digit SIC Code, 1996: Petroleum Refining, SIC Code 29	
	(in Rank Order)	265
Table 7-9.	Quantities of TRI Chemicals in Waste by 4-digit SIC Code,	203
Tuble 7 %.	1996: Petroleum Refining, SIC Code 29 (in Rank Order)	266
Table 7-10.	Current Year and Projected Quantities of TRI Chemicals in Waste,	200
14010 / 10.	1996-1998: Petroleum Refining, SIC Code 29	268
Table 7-11.	Number of Forms Reporting Source Reduction Activity, 1996:	200
14010 7-11.	Petroleum Refining. SIC Code 29	269
Table 7-12.	Comparison of TRI On-site and Off-site Releases, Other On-site	207
14010 7-12.	Waste Management, and Transfers Off-site for Further Waste	
	Management, 1995-1996: Petroleum Refining, SIC Code 29	271
Table 7-13.	Comparison of TRI On-site and Off-site Releases, Other On-site	4/1
1 aut /-13.	Waste Management, and Transfers Off-site for Further Waste	
	Management, 1988 and 1994-1996: Petroleum Refining, SIC Code 29	273
Table 7-14.	TRI On-site and Off-site Releases by 4-digit SIC Code,	213
1 aute /-14.	1988 and 1994-1996: Petroleum Refining, SIC Code 29	275
Table 7-15.	TRI Other On-site Waste Management by 4-digit SIC Code,	213
14016 7-13.	1988 and 1994-1996: Petroleum Refining, SIC Code 29	276
Table 7-16.	TRI Transfers Off-site for Further Waste Management by 4-digit	270
1 able 7-10.	• •	277
Table 7-17.	SIC Code, 1988 and 1994-1996: Petroleum Refining, SIC Code 29	211
1 able 7-17.	TRI Waste Management Data, 1991, 1994-1996: Petroleum	200
	Refining, SIC Code 29	200
Eigung 7 1	Distribution of TDI On site and Off site Delegges 1006.	
Figure 7-1.	Distribution of TRI On-site and Off-site Releases 1996:	257
Eigyma 7.2	Petroleum Refining (SIC Code 29)	231
Figure 7-2	TRI On-site and Off-site Releases, SIC Codes with Largest	250
Eigen 7.2	Releases, 1996: Petroleum Refining (SIC Code 29)	258
Figure 7-3.	Distribution of TRI Other On-site Waste Management, 1996:	250
	Petroleum Refining (SIC Code 29)	259



	Figure 7-4.	TRI Other On-site Waste Management, SIC Codes with Largest	
		Totals, 1996: Petroleum Refining (SIC Code 29)	259
	Figure 7-5.	Distribution of TRI Transfers Off-site for Further Waste	
		Management, 1996: Petroleum Refining (SIC Code 29)	260
	Figure 7-6.	TRI Transfers Off-site for Further Waste Management, SIC	
		Codes with Largest Totals, 1996: Petroleum Refining (SIC Code 29)	261
	Figure 7-7.	TRI On-site and Off-site Releases of OSHA Carcinogens,	
		SIC Codes with Largest Releases, 1996: Petroleum Refining	2 - 7
	T'	(SIC Code 29)	265
	Figure 7-8.	Distribution of TRI Production-Related Waste, 1996:	266
	E: 7.0	Petroleum Refining (SIC Code 29)	266
	Figure 7-9.	Distribution of TRI Production-Related Waste, 1996:	267
	E' 7.10	Petroleum Refining (SIC Code 29)	267
	Figure 7-10.	Projected Percentage Changes in Quantities of TRI Chemicals	260
	E' 7.11	in Waste, 1996-1998: Petroleum Refining (SIC Code 29)	269
	Figure 7-11.	Percentage Change in On-site and Off-site Releases, 1995-1996:	272
	E' 7.10	Petroleum Refining (SIC Code 29)	212
	Figure 7-12.	Percentage Change in On-site and Off-site Releases, 1988-1996:	274
	E' 7.10	Petroleum Refining (SIC Code 29)	274
	Figure 7-13.	Percentage Change in Quantities of TRI Chemicals in Waste,	201
		1991-1996: Petroleum Refining (SIC Code 29)	281
	Box 7-1.	SIC Code 29, Petroleum Refining and Related Industries:	
	<b>D</b> OX / 1.	Codes and Classifications	254
		Codes and Classifications	25 1
	Map 7-1.	Total On- and Off-site Releases, 1996: Petroleum Refining,	
	1	SIC Code 29	263
CHAF	PTER 8 TO	OXICS RELEASE INVENTORY DATA FOR PRIMARY METALS	
	(S	IC CODE 33)	285
	A Look at the	e Primary Metal Industries (SIC Code 33)	285
	Steel		285
	Aluminur	n, Copper, Lead, Zinc, and Other Nonferrous Metals	289
	Other En	vironmental Issues	290
	1996 TRI Da	ta for Primary Metals	290
	Multiple	Codes within SIC Code 33	291
	On- and (	Off-site Releases	293
	Other On	-site Waste Management	293
		Off-site for Further Waste Management	
	1996 TRI Da	ta by State for Primary Metals	297
	1996 TRI Da	ta by Chemical for Primary Metals	298
	OSHA Ca	arcinogens	300
	1996 TRI Ch	emicals in Waste for Primary Metals	302



Projected	Quantities of TRI Chemicals in Waste	304
Source Reduction Activity		
Year-to-Year Comparisons for Primary Metals		
1995-1996 TRI Data for Primary Metals		
On- and Off-site Releases		
Other	On-site Waste Management	308
Trans	fers Off-site for Further Waste Management	308
1988-199	6 TRI Data for Primary Metals	309
1988-	1996 Data for Four-Digit Industries in Primary Metals	313
Facili	ties with Large Increases and Decreases in Releases, 1988-1996	319
1991-199	6 Waste Management Data for Primary Metals	323
Facili	ties with Large Increases and Decreases in Waste Management,	
1991-	1996	324
Sources		328
	CHAPTER 8 EXHIBITS	
Table 8-1.	Summary of TRI Information by 4-digit SIC Code, 1996:	
	Primary Metals, SIC Code 33	288
Table 8-2.	Multiple SIC Codes, 1996: Primary Metals, SIC Code 33	291
Table 8-3.	TRI On-site and Off-site Releases, 1996: Primary Metals,	
	SIC Code 33 (in Rank Order)	292
Table 8-4.	TRI Other On-site Waste Management, 1996: Primary Metals,	
	SIC Code 33 (in Rank Order)	295
Table 8-5.	TRI Transfers Off-site for Further Waste Management, 1996:	
	Primary Metals, SIC Code 33 (in Rank Order)	297
Table 8-6.	Summary of TRI Information by State, 1996: Primary Metals,	
	SIC Code 33	300
Table 8-7.	The 15 Chemicals with the Largest Total On-site and Off-site	
	Releases, 1996: Primary Metals, SIC Code 33 (in Rank Order)	302
Table 8-8.	TRI On-site and Off-site Releases of OSHA Carcinogens by	
	4-digit SIC Code, 1996: Primary Metals, SIC Codes 33	
	(in Rank Order)	303
Table 8-9.	Quantities of TRI Chemicals in Waste by 4-digit SIC Code,	
	1996: Primary Metals, SIC Code 33 (in Rank Order)	305
Table 8-10.	Current Year and Projected Quantities of TRI Chemicals in Waste,	
	1996-1998: Primary Metals, SIC Code 33	307
Table 5-10.	Current Year and Projected Quantities of TRI Chemicals in Waste,	
	1996-1998: Pulp and Paper, SIC Code 26	308
Table 8-11.	Number of Forms Reporting Source Reduction Activity, 1996:	
	Primary Metals, SIC Code 33	309
Table 8-12.	Comparison of TRI On-site and Off-site Releases,	
	Other On-site Waste Management, and Transfers Off-site for	
	Further Waste Management, 1995-1996: Primary Metals,	
	SIC Code 33	310



Table 8-13.	Comparison of TRI On-site and Off-site Releases, Other On-site Waste Management, and Transfers Off-site for Further	
	Waste Management, 1988 and 1994-1996: Primary Metals, SIC Code 33	212
Table 8-14.	TRI On-site and Off-site Releases by 4-digit SIC Code,	312
1 abic 6-14.	1988 and 1994-1996: Primary Metals, SIC Code 33	314
Table 8-15.	TRI Other On-site Waste Management by 4-digit SIC Code,	517
ruote o 15.	1988 and 1994-1996: Primary Metals, SIC Code 33 33	317
Table 8-16.	TRI Transfers Off-site for Further Waste Management by	017
	4-digit SIC Code, 1988 and 1994-1996: Primary Metals,	
	SIC Code 33	320
Table 8-17.	TRI Waste Management Data, 1991, 1994-1996:	
	Primary Metals, SIC Code 33	325
Figure 8-1.	Distribution of TRI On-site and Off-site Releases, 1996:	
C	Primary Metals (SIC Code 33)	293
Figure 8-2.	TRI On-site and Off-site Releases, SIC Codes with Largest	
C	Releases, 1996: Primary Metals (SIC Code 33)	294
Figure 8-3.	Distribution of TRI Other On-site Waste Management, 1996:	
C	Primary Metals (SIC Code 33)	296
Figure 8-4.	TRI Other On-site Waste Management, SIC Codes with Largest	
C	Totals, 1996: Primary Metals (SIC Code 33)	296
Figure 8-5.	Distribution of TRI Transfers Off-site for Further Waste	
_	Management, 1996: Primary Metals (SIC Code 33)	298
Figure 8-6.	TRI Transfers Off-site for Further Waste Management,	
_	SIC Codes with Largest Totals, 1996: Primary Metals	
	(SIC Code 33)	299
Figure 8-7.	TRI On-site and Off-site Releases of OHSA Carcinogens,	
	SIC Codes with Largest Totals, 1996: Primary Metals (SIC Code 33)	304
Figure 8-8.	Distribution of TRI Production-related Waste, 1996:	
	Primary Metals (SIC Code 33)	305
Figure 8-9.	Distribution of Production-related Waste, 1996:	
	Primary Metals (SIC Code 33)	306
Figure 8-10.	Projected Percentage Changes in Quantities of TRI Chemicals	
	in Waste, 1996-1998: Primary Metals (SIC Code 33)	308
Figure 8-11.	Percentage Change in On-site and Off-site Releases Quantities,	
	1995-1996: Primary Metals (SIC Code 33)	311
Figure 8-12.	e e	
	Primary Metals (SIC Code 33)	316
Figure 8-13.	Percentage Change in Quantities of TRI Chemicals in Waste,	
	1991-1996: Primary Metals (SIC Code 33)	326
D 0.1		201
Box 8-1.	SIC Code 33, Primary Metal Industries: Codes and Classifications	286
Man 8-1	Total On- and Off-site Releases 1996: Primary Metals, SIC Code 33	301
IVIALL ()= I	TORRESON OF AUGUSTICANIE NEIGANEN 1770 FILITALV MICIAIN AUGUSTA CORE 33	11/1



CHAPTER 9	TOXICS RELEASE INVENTORY DATA FOR ELECTRICAL EQUIPMENT (SIC CODE 36)	329
A Look at	Electronic and Other Electrical Equipment and Components,	
	mputer Equipment (SIC Code 36)	329
•	Data for Electrical Equipment	
	d Off-site Releases	
Other (	On-site Waste Management	336
Transfe	ers Off-site for Further Waste Management	337
1996 TRI 1	Data by State for Electrical Equipment	339
	Data by Chemical for Electrical Equipment	
	Carcinogens	
1996 TRI (	Chemicals in Waste for Electrical Equipment	346
	Off-site to Disposal	
	ed Quantities of TRI Chemicals in Waste	
_	Reduction Activity	
	ar Comparisons for Electrical Equipment	
	996 TRI Data for Electrical Equipment	
On	- and Off-site Releases	351
	ner On-site Waste Management	
	nsfers Off-site for Further Waste Management	
	996 TRI Data for Electrical Equipment	
	8-1996 Data for Four-Digit Industries in Electrical Equipment	
	ilities with Large Increases and Decreases in Releases, 1988-1996	
	996 Waste Management Data for Electrical Equipment	
	ilities with Large Increases and Decreases in Waste Management,	
	01-1996	369
	CHAPTER 9 EXHIBITS	
Table 9-1.	Summary of TRI Information by 4-digit SIC Code, 1996:	
	Electrical Equipment, SIC Code 36	
Table 9-2.	Multiple SIC Codes, 1996: Electrical Equipment, SIC Code 36	335
Table 9-3.	TRI On-site and Off-site Releases, 1996: Electrical Equipment,	
	SIC Code 36 (in Rank Order)	336
Table 9-4.	TRI Other On-site Waste Management, 1996: Electrical Equipment,	
	SIC Code 36 (in Rank Order)	338
Figure 9-3	Distribution of TRI Other On-site Waste Management, 1996:	
	Electrical Equipment (SIC Code 36)	338
Table 9-5.	TRI Transfers Off-site for Further Waste Management, 1996:	
	Electrical Equipment, SIC Code 36 (in Rank Order)	340
Table 9-6.	Summary of TRI Information by State, 1996: Electrical Equipment,	
	SIC Code 36	342



Table 9-7.	The 15 Chemicals with the Largest Total On-site and Off-site Releases,	
	1996: Electrical Equipment, SIC Code 36 (in Rank Order)	344
Table 9-8.	TRI On-site and Off-site Releases of OSHA Carcinogens by	
	4-digit SIC Code, 1996: Electrical Equipment, SIC Code 36	
	(in Rank Order)	345
Table 9-9.	Quantities of TRI Chemicals in Waste by 4-digit SIC Code, 1996:	
	Electrical Equipment, SIC Code 36 (in Rank Order)	347
Table 9-10.	Current Year and Projected Quantities of TRI Chemicals in Waste,	
	1996-1998: Electrical Equipment, SIC Code 26	349
Table 9-11.	Number of Forms Reporting Source Reduction Activity, 1996:	
	Electrical Equipment, SIC Code 36	351
Table 9-12.	Comparison of TRI On-site and Off-site Releases, Other On-site	
	Waste Management, and Transfers Off-site for Further Waste	
	Management, 1995-1996: Electrical Equipment, SIC Code 36	352
Table 9-13.	Comparison of TRI On-site and Off-site Releases, Other	
10.010 / 10.	On-site Waste Management, and Transfers Off-site for Further	
	Waste Management, 1988 and 1994-1996: Electrical Equipment,	
	SIC Code 36	355
Table 9-14.	TRI On-site and Off-site Releases by 4-digit SIC Code,	555
14010 7 1 1.	1988 and 1994-1996: Electrical Equipment, SIC Code 36	357
Table 9-15.	TRI Other On-site Waste Management by 4-digit SIC Code,	551
14010 / 13.	1988 and 1994-1996: Electrical Equipment, SIC Code 36	361
Table 9-16.	TRI Transfers Off-site for Further Waste Management by	501
1 abic 7-10.	4-digit SIC Code, 1988 and 1994-1996: Electrical Equipment,	
	SIC Code 36	365
Table 9-17.	TRI Waste Management Data, 1991, 1994-1996:	505
1 able 9-17.	Electrical Equipment, SIC Code 36	370
	Electrical Equipment, Sie Code 30	570
Figure 9-1.	Distribution of TRI On-site and Off-site Releases, 1996:	
riguic $\mathcal{I}^{-1}$ .	Electrical Equipment (SIC Code 36)	337
Figure 9-2.	TRI On-site and Off-site Releases, SIC Codes with Largest Releases,	337
rigule 9-2.	1996: Electrical Equipment (SIC Code 36)	227
Figure 0.2		337
Figure 9-3.	Distribution of TRI Other On-site Waste Management, 1996:	220
E: 0. 4	Electrical Equipment (SIC Code 36)	339
Figure 9-4.	TRI Other On-site Waste Management, SIC Codes with Largest	220
Eigung 0.5	Totals, 1996: Electrical Equipment (SIC Code 36)	339
Figure 9-5.	Distribution of TRI Transfers Off-site for Further Waste Management,	241
E' 0.6	1996: Electrical Equipment (SIC Code 36)	341
Figure 9-6.	TRI Transfers Off-site for Further Waste Management,	
	SIC Codes with Largest Totals, 1996: Electrical Equipment	241
E' 0.7	(SIC Code 36)	341
Figure 9-7.	TRI On-site and Off-site Releases of OHSA Carcinogens,	
	SIC Codes with Largest Totals, 1996: Electrical Equipment	2.1.
	(SIC Code 36)	346



	Figure 9-8.	Distribution of TRI Production-related Waste, 1996:	
		Electrical Equipment (SIC Code 36)	348
	Figure 9-9.	Distribution of Production-related Waste, 1966 Electrical	
		Equipment (SIC Code 36)	348
	Figure 9-10.	Projected Percentage Changes in Quantities of TRI Chemicals	
		in Waste, 1996-1998: Electrical Equipment (SIC Code 36)	350
	Figure 9-11.	Percentage Change in On-site and Off-site Releases, 1995-1996:	
		Electrical Equipment (SIC Code 36)	353
	Figure 9-12.	Percentage Change in On-site and Off-site Releases, 1988-1996:	
		Electrical Equipment (SIC Code 36)	354
	Figure 9-13.		271
		1991-1996: Electrical Equipment (SIC Code 36)	371
	Box 9-1.	SIC Code 26 Electronic and Other Electrical Equipment and	
	DOX 9-1.	SIC Code 36, Electronic and Other Electrical Equipment and Components, Except Computer Equipment: Codes and Classifications.	220
		Components, except Computer Equipment. Codes and Classifications.	330
	Map 9-1.	Total On- and Off-site Releases, 1996: Electrical Equipment,	
	ν <b>ι</b> αρ	SIC Code 36	343
O114	DTED 40 T	TOYIOO DELEACE INIVENTORY DATA FOR	
СНА		OXICS RELEASE INVENTORY DATA FOR	275
	r	EDERAL FACILITIES	3/5
	A Look at the	e Federal Facilities Reporting to TRI	375
		ta for Federal Facilities	
		Off-site Releases	
	Other On	-site Waste Management	378
		Off-site for Further Waste Management	
	1996 TRI Da	ta by State for Federal Facilities	380
	1996 TRI Da	ta by Chemical for Federal Facilities	381
	OSHA C	arcinogens	382
	1996 TRI Ch	emicals in Waste for Federal Facilities	385
		antities of TRI Chemicals in Waste	
		eduction Activity	
		Comparisons for Federal Facilities	
		6 TRI Data for Federal Facilities	
		nd Off-site Releases	389
	Other	nd Off-site Releases On-site Waste Management	389 390
	Other Trans	nd Off-site Releases On-site Waste Management fers Off-site for Further Waste Management	389 390 391
	Other Trans 1995-199	nd Off-site Releases On-site Waste Management fers Off-site for Further Waste Management 6 Waste Management Data for Federal Facilities	389 390 391
	Other Trans 1995-199 Facili	nd Off-site Releases On-site Waste Management fers Off-site for Further Waste Management 6 Waste Management Data for Federal Facilities ties with Large Increases and Decreases in Waste Management,	389 390 391 396
	Other Trans 1995-199 Facili 1995-	nd Off-site Releases On-site Waste Management fers Off-site for Further Waste Management 6 Waste Management Data for Federal Facilities ties with Large Increases and Decreases in Waste Management, 1996	389 390 391 396
	Other Trans 1995-199 Facili 1995- 1994-199	nd Off-site Releases On-site Waste Management fers Off-site for Further Waste Management 6 Waste Management Data for Federal Facilities ties with Large Increases and Decreases in Waste Management, 1996 6 TRI Data for Federal Facilities	389 390 391 396 397
	Other Trans 1995-199 Facili 1995- 1994-199 On- a	nd Off-site Releases On-site Waste Management fers Off-site for Further Waste Management 6 Waste Management Data for Federal Facilities ties with Large Increases and Decreases in Waste Management, 1996	389 390 391 396 397 397



Facili	ties with Large Increases and Decreases in Releases, 1994-1996	400
1994-199	6 Waste Management Data for Federal Facilities	402
Facili	ties with Large Increases and Decreases in Waste Management,	
	1996	405
	CHAPTER 10 EXHIBITS	
Table 10-1.	Summary of TRI Information by Agency, 1996: Federal Facilities	
Table 10-2.	TRI On-site and Off-site Releases, 1996: Federal Facilities	377
Table 10-3.	TRI Other On-site Waste Management, 1996: Federal Facilities	379
Table 10-4.	TRI Transfers Off-site for Further Waste Management, 1996:	
	Federal Facilities	
Table 10-5.	Summary of TRI Information by State, 1996: Federal Facilities	382
Table 10-6.	The 15 Chemicals with the Largest Total On-site and Off-site	
	Releases, 1996: Federal Facilities (in Rank Order)	383
Table 10-7.	TRI On-site and Off-site Releases of OSHA Carcinogens, 1996:	
	Federal Facilities (in Rank Order)	
Table 10-8.	Quantities of TRI Chemicals in Waste, 1996: Federal Facilities	386
Table 10-9.	Current Year and Projected Quantities of TRI Chemicals in Waste,	
	1996-1998: Federal Facilities	388
Table 10-10.	Number of Forms Reporting Source Reduction Activity, 1996:	
	Federal Facilities	
Table 10-12.	TRI On-site and Off-site Releases, 1995-1996: Federal Facilities	393
Table 10-11.	Comparison of TRI On-site and Off-site Releases,	
	Other On-site Waste Management, and Transfers Off-site	201
T 11 10 10	for Further Waste Management, 1995-1996: Federal Facilities	
Table 10-13.	$\mathcal{E}$	394
Table 10-14.	E ,	205
T-1-1- 10 15	1995-1996: Federal Facilities	
Table 10-15.	$\mathcal{E}$	398
Table 10-16.	1	
	Other On-site Waste Management, and Transfers for Further Waste Management, 1994-1996: Federal Facilities	200
Table 10-17.	TRI On-site and Off-site Releases, by Agency, 1994-1996:	399
1 able 10-17.	Federal Facilities	401
Table 10-18.		401
1 able 10-16.	1994-1996: Federal Facilities	404
Table 10-19.	TRI Transfers Off-site for Further Waste Management,	404
1abic 10-17.	by Agency, 1994-1996: Federal Facilities	406
Table 10-20.	TRI Waste Management Data, 1994-1996: Federal Facilities	
1 auto 10-20.	1 101 Waste Management Data, 1774-1770. Pederal Pacifices	<del>1</del> 0/
Figure 10-1.	Distribution of TRI On-site and Off-site Releases, 1996:	
1.50.0 10 1.	Federal Facilities	377



	Figure 10-2.	TRI On-site and Off-site Releases, 1996: Federal Facilities	
		(Agencies with Largest Totals)	378
	Figure 10-3.	Distribution of TRI Other On-site Waste Management, 1996:	
		Federal Facilities	379
	Figure 10-4.	TRI Other On-site Waste Management, 1996:	
		Federal Facilities (Agencies with Largest Totals)	381
	Figure 10-5.	Distribution of TRI Transfers Off-site for Further Waste	
		Management, 1996: Federal Facilities	381
	Figure 10-6.	TRI Transfers Off-site for Further Waste Management, 1996:	
		Federal Facilities (Agencies with Largest Totals)	383
	Figure 10-7.	TRI On-site and Off-site Releases of OHSA Carcinogens, 1996:	
		Federal Facilities (Agencies with Largest Totals)	
	Figure 10-8.	Distribution of TRI Production-related Waste, 1996: Federal Facilities .	387
	Figure 10-9.	Distribution of Production-related Waste, 1996: Federal Facilities	387
	Figure 10-10.	Percentage Changes in On-site and Off-site Releases, 1995-1996:	
		Federal Facilities	390
	Figure 10-11.	Percentage Change in On-site and Off-site Releases, 1994-1996:	
		Federal Facilities	400
	Box 10-1.	Federal Agencies Reporting to TRI	376
	Box 10-2.	Correction to TRI Other On-site Waste Management Data,	
		1995-1996: Federal Facilities	392
	Box 10-3.	Corrected On-site Waste Management Quantities, 1994-1996:	
		Federal Facilities	403
	Map 10-1.	Total On- and Off-site Releases, 1996: Federal Facilities	384
		APPENDICES	
		APPENDICES	
APPE	NDIX A EF	PA REGIONAL OFFICE AND STATE TRI CONTACTS	A-1
	EDA Dagi	onal Section 313 Coordinators	Λ 1
	_	Public Contacts	
	State TKI	Fublic Collects	A-3
APPE	NDIX B P	UBLIC ACCESS TO THE TOXICS RELEASE INVENTORY	
		ND RELATED INFORMATION	B-1
	_	Toxics Release Inventory (TRI) Products and Services	
		cts	
		ance Services	
	Online	Services	B-6



APPENDIX C	ADDITIONAL INFORMATION FOR ASSESSING THE IMPACTS OF TRI CHEMICALS	C-1
Hazard	Data Availability on High Production Volume (HPV) TRI Chemicals	C-1
Screen	ing Information System/LAN (SIS/L)	C-7
	5/L Information Lists	
	APPENDIX C EXHIBITS	
Table A.	Hazard Data Availability of U.S. High Production Volume TRI Chemicals	$C^{2}$
Table B.	Hazard Data Availability for U.S. High Production Volume (HPV) TRI	C-2
Table D.	Chemicals	C-5
Table C.	Hazard Data Availability for U.S. High Production Volume (HPV) TRI Chemicals: Total On-and Off-site Releases in Excess of	C-3
	1 Million Pounds	C-6
Table D.	Screening Information System/LAN	
Figure A.	Hazard Data Availability for U.S. High Production Volume (HPV) TRI Chemical	C-6
Figure B.	Hazard Data Availability for U.S. High Production Volume (HPV) TRI Chemicals: Total On-and Off-site Releases in Excess of	
	1 Million Pounds	C-7
APPENDIX D	TRI FORM R AND FORM A FOR 1996	D-1
Form F	<b>?</b>	D-1
	A Certification Statement	

