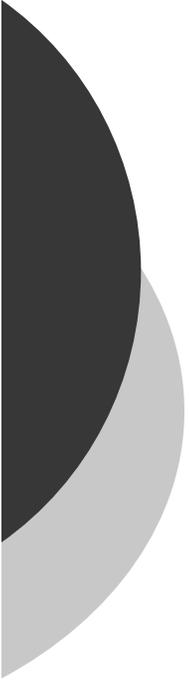


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# TRI and Source Reduction Reporting

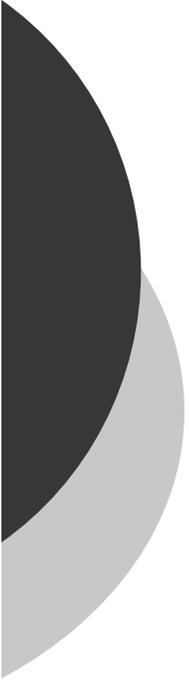
Ruth Borgelt  
Michigan SARA Title III Program  
October 2004



# Toxic Chemical Release Reporting

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- Section 313 of SARA Title III (Superfund Amendments and Reauthorization Act of 1986)
- Emergency Planning and Community Right-to-Know Act (EPCRA)



## Section 313 Reporters

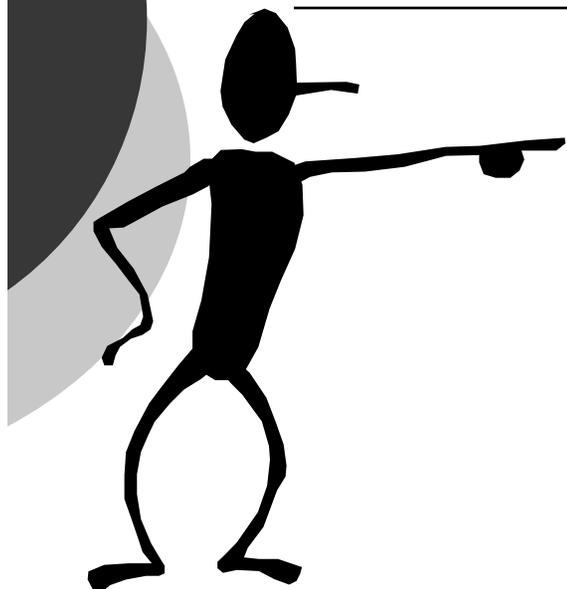
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Facilities with:

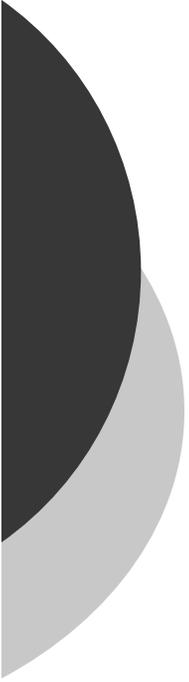
1. Ten or more full-time employees (or the equivalent of 20,000 hours per year); AND
2. “Covered” industry based on its Standard Industrial Classification (SIC) Code or Federal facility, AND
3. Exceeds an *activity threshold* for a listed section 313 chemical.

# Section 313 Covered Industries

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- Manufacturing
- Electricity Generating Facilities
- Treatment, Storage and Disposal Facilities
- Petroleum Bulk Terminals
- Chemical Distributors
- Solvent Recovery Services
- Metal Mining and Coal Mining
- Federal Facilities



# Toxic Chemical Release Report

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- Annual report due July 1
- Covers releases and waste management of listed toxic chemicals during the preceding calendar year.

**Form R**

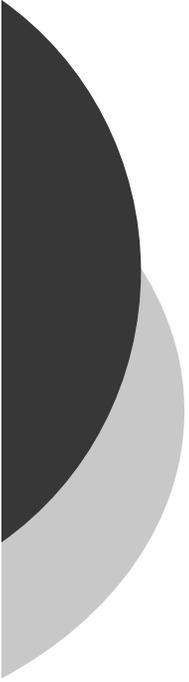
# Pollution Prevention Act of 1990

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- Established a national policy to prevent or reduce pollution at the source wherever feasible
- Facilities required to report on source reduction and recycling



## Form R



## Form R Data

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- Facility information and chemical specific information.
- Media releases and waste management activities.
- Total quantities released and managed as waste.
- Source reduction activities.

# Form R

## EPA FORM R (For 2002 Report Year)

Form Approved OMB Number: 2070-0093

Approval Expires: 10/31/2003

Page 1 of 5

(IMPORTANT: Type or print; read instructions before completing form)

 <b>EPA</b> United States Environmental Protection Agency		<h1>FORM R</h1>		<b>TOXIC CHEMICAL RELEASE INVENTORY REPORTING FORM</b>	
		Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986, also known as Title III of the Superfund Amendments and Reauthorization Act			
<b>WHERE TO SEND COMPLETED FORMS:</b> 1. TRI Data Processing Center P.O. Box 1513 Lanham, MD 20703-1513 ATTN: TOXIC CHEMICAL RELEASE INVENTORY			2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)		Enter "X" here if this is a revision  <input type="checkbox"/>
			For EPA use only  <input type="checkbox"/>		
<b>Important: See instructions to determine when "Not Applicable (NA)" boxes should be checked.</b>					
<b>PART I. FACILITY IDENTIFICATION INFORMATION</b>					
<b>SECTION 1. REPORTING YEAR</b> _____					
<b>SECTION 2. TRADE SECRET INFORMATION</b>					
<b>2.1</b> Are you claiming the toxic chemical identified on page 2 trade secret? <input type="checkbox"/> Yes (Answer question 2.2; Attach substantiation forms)		<input type="checkbox"/> No (Do not answer 2.2; Go to Section 3)		<b>2.2</b> Is this copy <input type="checkbox"/> Sanitized <input type="checkbox"/> Unsanitized (Answer only if "YES" in 2.1)	
<b>SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)</b>					
I hereby certify that I have reviewed the attached documents and that, to the best of my knowledge and belief, the submitted information is true and complete and that the amounts and values in this report are accurate based on reasonable estimates using data available to the preparers of this report.					
Name and official title of owner/operator or senior management official:				Signature:	
<input type="text"/>				<input type="text"/>	
				Date Signed:	
				<input type="text"/>	
<b>SECTION 4. FACILITY IDENTIFICATION</b>					

# Form R Section 8

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<b>SECTION 8. SOURCE REDUCTION AND RECYCLING ACTIVITIES</b>					
		Column A Prior Year (pounds/year*)	Column B Current Reporting Year (pounds/year*)	Column C Following Year (pounds/year*)	Column D Second Following Year (pounds/year*)
<b>8.1</b>	Quantity released ***				
<b>8.2</b>	Quantity used for energy recovery onsite				
<b>8.3</b>	Quantity used for energy recovery offsite				
<b>8.4</b>	Quantity recycled onsite				
<b>8.5</b>	Quantity recycled offsite				
<b>8.6</b>	Quantity treated onsite				
<b>8.7</b>	Quantity treated offsite				
<b>8.8</b>	Quantity released to the environment as a result of remedial actions, catastrophic events, or one-time events not associated with production processes (pounds/year)				
<b>8.9</b>	Production ratio or activity index				

# Form R Section 8.10

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<b>8.10</b>	Did your facility engage in any source reduction activities for this chemical during the reporting year? If not, enter "NA" in Section 8.10.1 and answer Section 8.11.				
	Source Reduction Activities [enter code(s)]	Methods to Identify Activity (enter codes)			
<b>8.10.1</b>		<b>a.</b>	<b>b.</b>	<b>c.</b>	
<b>8.10.2</b>		<b>a.</b>	<b>b.</b>	<b>c.</b>	
<b>8.10.3</b>		<b>a.</b>	<b>b.</b>	<b>c.</b>	
<b>8.10.4</b>		<b>a.</b>	<b>b.</b>	<b>c.</b>	
<b>8.11</b>	Is additional information on source reduction, recycling, or pollution control activities included with this report ? (Check one box)			YES <input type="checkbox"/>	NO <input type="checkbox"/>

# Form R Section 8

---

<b>SECTION 8. SOURCE REDUCTION AND RECYCLING ACTIVITIES</b>					
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8.7	Quantity treated offsite				
8.8	Quantity released to the environment as a result of remedial actions, catastrophic events, or one-time events not associated with production processes. (pounds/year)				
8.9	Production ratio or activity index				

Total Production-Related Waste (*TPRW*) = Sum of sections 8.1-8.7

# Form R Section 8

<b>SECTION 8. SOURCE REDUCTION AND RECYCLING ACTIVITIES</b>		Column A Prior Year (pounds/year*)	Column B Current Reporting Year (pounds/year*)	Column C Following Year (pounds/year*)	Column D Second Following Year (pounds/year*)
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<b>8.9</b>	Production ratio or activity index				

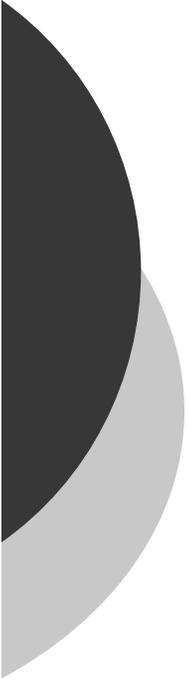
# Form R Section 8

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# Source Reduction Activities

8.10	Did your facility engage in any source reduction activities for this chemical during the reporting year? If not, enter "NA" in Section 8.10.1 and answer Section 8.11.		
	Source Reduction Activities [enter code(s)]	Methods to Identify Activity (enter codes)	
8.10.1	a.	b.	c.
8.10.2	a.	b.	c.
8.10.3	a.	b.	c.
8.10.4	a.	b.	c.
8.11	Is additional information on source reduction, recycling, or pollution control activities included with this report ? (Check one box)		YES <input type="checkbox"/> NO <input type="checkbox"/>

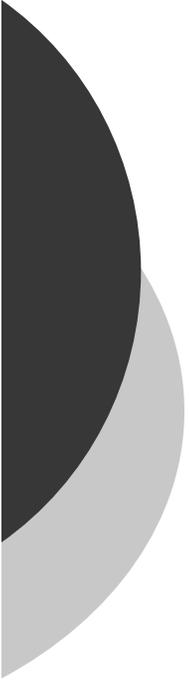
Source reduction activities are actions aimed at reducing the amount disposed or otherwise released, or managed through energy recovery, recycling or treatment.



# Source Reduction Activities

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- Good operating practices (3)
- Inventory control (6)
- Raw material modifications (6)
- Process modifications (6)
- Cleaning and degreasing (10)
- Surface preparation and finishing (5)
- Product modifications (4)



# Source Reduction Methods

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- Pollution prevention opportunity audit (2)
- Materials balance audit
- Participative team management
- Employee recommendation (2)
- Government and trade association/ industry technical assistance program (3)
- Vendor assistance
- Other

# Source Reduction Activities

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8.10	Did your facility engage in any source reduction activities for this chemical during the reporting year? If not, enter "NA" in Section 8.10.1 and answer Section 8.11.			
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8.10.4		a.	b.	c.
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Example: a facility modifies its process by using a different catalyst. This results in the elimination of a TRI chemical in the production line.

Process modification identified through participative team management.

# Source Reduction Activities

8.10	Did your facility engage in any source reduction activities for this chemical during the reporting year? If not, enter "NA" in Section 8.10.1 and answer Section 8.11.			
	Source Reduction Activities [enter code(s)]	Methods to Identify Activity (enter codes)		
8.10.1	W53	a. T04	b.	c.
8.10.2		a.	b.	c.
8.10.3		a.	b.	c.
8.10.4		a.	b.	c.
8.11	Is additional information on source reduction, recycling, or pollution control activities included with this report ? (Check one box)			YES <input type="checkbox"/> NO <input type="checkbox"/>

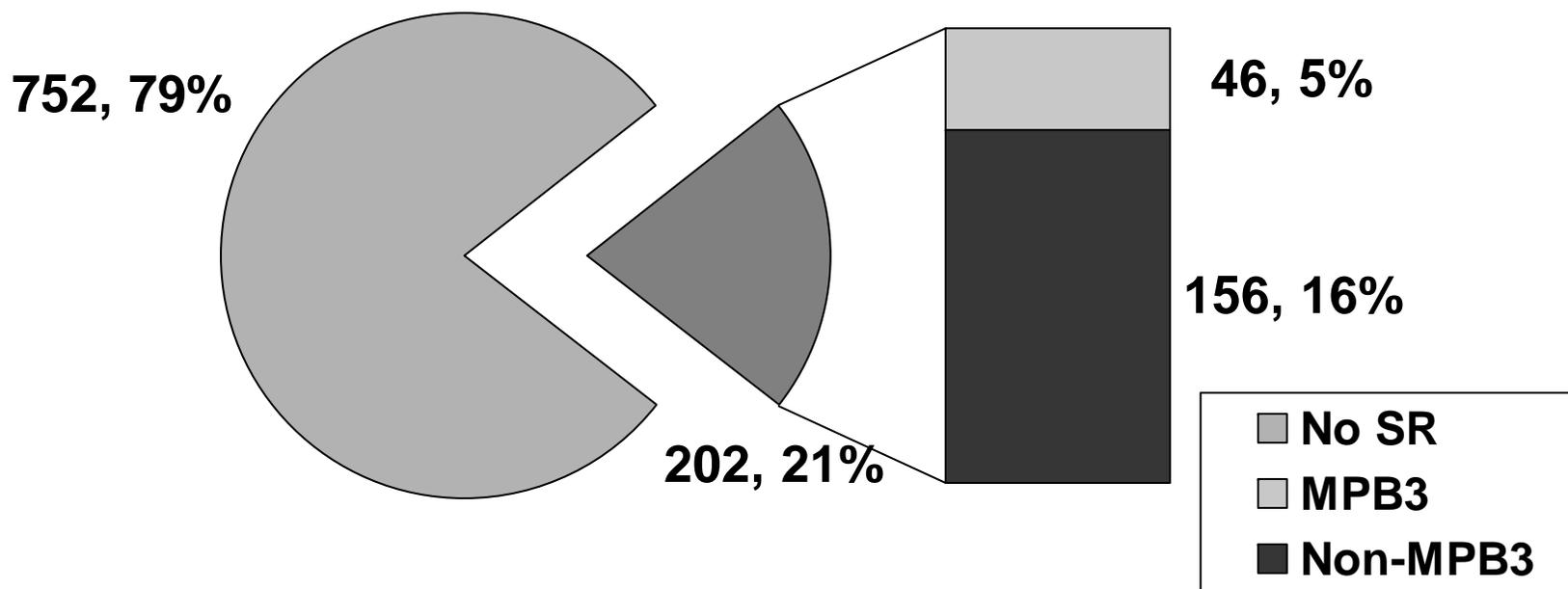
Example: a facility modifies its process by using a different catalyst. This results in the elimination of a TRI chemical in the production line.

Process modification identified through participative team management.

# Source Reduction Activities

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## 2002 TRI Facilities Reporting Source Reduction Activities

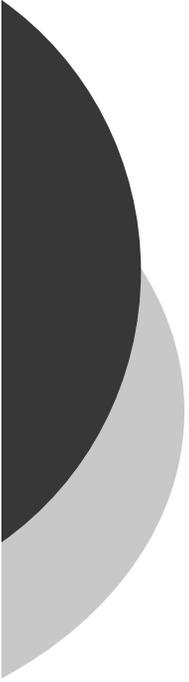


# Source Reduction Activities

Major SIC Group	Major Industry Group	Number of Facilities
20	Food and Kindred Products	4
24	Lumber and Wood Products	2
25	Furniture and Fixtures	6
26	Paper and Allied Products	4
27	Printing, Publishing, Allied Ind.	5
28	Chemicals and Allied Products	41
29	Petroleum Refining and Related Ind.	1
30	Rubber and Misc. Plastics Products	19
31	Leather and Leather Products	2
32	Stone, Clay, Glass, Concrete Products	6
33	Primary Metals	21
34	Fabricated Metal Products	29
35	Industrial/Commercial Machinery	7
36	Electronic	3
37	Transportation Equipment	43
38	Measuring, Analyzing, and Cont. Inst.	3
39	Misc. Manufacturing Ind.	2
49d	Treatment, Storage, and Disposal Facilities (4953)	1
49u	Electric Utilities (4911, 4931, and 4939)	1
51	Chemical Distributors (5169) and Petroleum Bulk Terminals (5171)	2
		202

# Source Reduction Activities

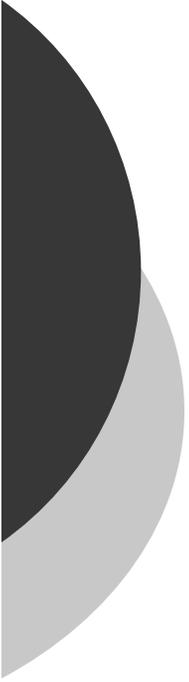
Activity	1998	1999	2000	2001	2002
Cleaning and Degreasing	60	47	34	35	41
Good Operating Practices	349	384	362	364	263
Inventory Control	64	79	95	79	94
Process Modifications	269	262	284	236	175
Product Modifications	53	35	64	53	35
Raw Material Modifications	67	74	70	95	80
Spill and Leak Prevention	248	159	179	182	105
Surface Preparation Finishing	50	60	56	40	38



# EPA P2 Websites

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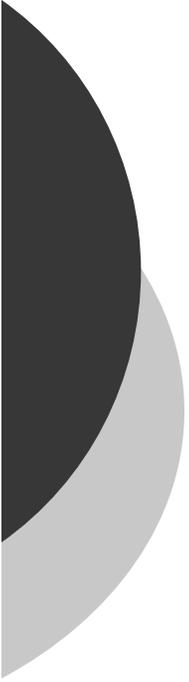
- Pollution Prevention Act of 1990  
<http://www.epa.gov/p2/p2policy/act1990.htm>
- Pollution Prevention Information Clearinghouse  
<http://www.epa.gov/opptintr/library/ppicindex.htm>
- Pollution Prevention Home Page, EPA  
<http://www.epa.gov/p2home>



# TRI Websites

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- EPA TRI Program  
<http://www.epa.gov/TRI>
- Michigan SARA Title III Program  
<http://www.michigan.gov/deqsara>
- Environmental Defense Fund Scorecard  
<http://www.scorecard.org>
- The Right-to-Know Network (RTKNET)  
<http://www.rtk.net>



## TRI Assistance

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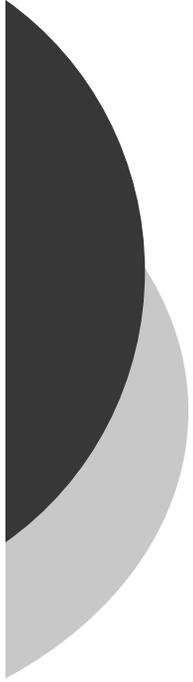
Contact:

Ruth Borgelt

Michigan SARA Title III Program

Voicemail: 517-373-9804

E-mail: [borgeltr@michigan.gov](mailto:borgeltr@michigan.gov)



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# TRI and Source Reduction Reporting

Ruth Borgelt  
Michigan SARA Title III Program  
October 2004