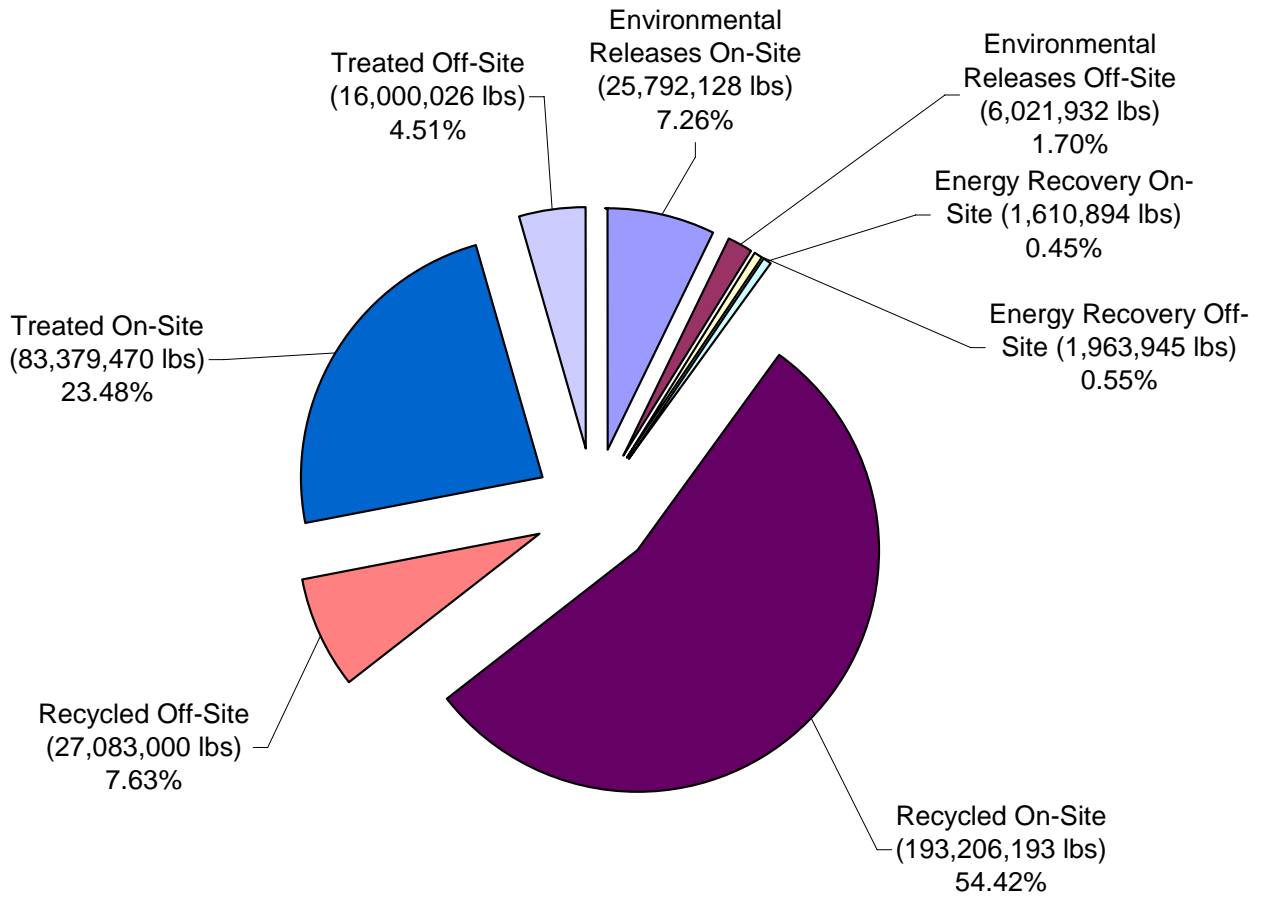


2003 Right-To-Know Chemical Information Report

State of Minnesota

A Summary of Toxic Release Inventory and Pollution Prevention Reports



Total Pounds: 355,057,588



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Preface

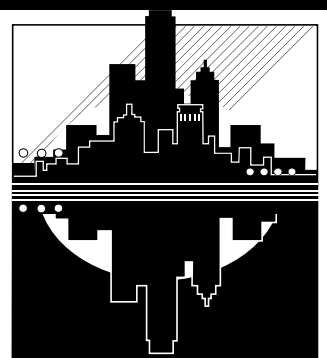
This report, covering calendar year 2003, is the annual summary of chemical management reports submitted by facilities in the State of Minnesota.

The Minnesota Emergency Planning and Community Right-to-Know Act (EPCRA) Program prepared this report to enhance accessibility to the data and to facilitate citizen awareness about toxic chemicals in their communities. The Minnesota EPCRA Program hopes that emergency planners and responders, health and environmental agencies, citizens, and business and industry can all benefit from this information.

For additional information about the chemicals reported under the "Emergency Planning and Community Right-to-Know Act," contact the Minnesota EPCRA Program at (651) 297-7372 or visit our website at www.epcra.state.mn.us. In addition, contact the U.S. Environmental Protection Agency's Information Center at 1-800-424-9346 or visit their website at www.epa.gov/tri.

**Minnesota Emergency
Planning and Community
Right-to-Know Act (EPCRA)
Program**

**Hazardous Materials
*You Have a Right
to Know!***



444 Cedar Street, Suite 223, Saint Paul, MN 55101

**(651)297-7372
TDD: (651)296-6555**

User's Guide to the 2003 *Right-to-Know Chemical Information Report*

What is this report about?

This report summarizes chemical management activities for 419 of the largest manufacturing and select non-manufacturing facilities in Minnesota. Chemical management includes:

- * Chemicals released into the environment
- * Chemicals used for energy recovery, both at the facility and off-site
- * Chemicals recycled, both on and off-site
- * Chemicals treated, both on and off-site

In addition, summary information on pollution prevention activities for the above mentioned facilities includes:

- * Numeric/non-numeric objectives established for each chemical
- * Processes and source reduction activities for each chemical
- * Date(s) of implementation of source reduction activities
- * Barriers to meeting numeric/non-numeric objectives

How can I use this report?

For a written or graphic summary, please see pages 7 to 12.

For information about the Minnesota EPCRA Program and SARA Title III, see pages 5 to 17.

For a sample of the type of information available for your community, turn to page 43. A complete listing is available from the Minnesota EPCRA Program (651-297-7372 or www.epcra.state.mn.us).

For a ranking of facilities by environmental releases, see pages 18-19.

For a ranking of facilities by pounds of chemicals managed, see pages 20-22.

For a ranking of facilities by total air releases, see pages 23-24.

For a statewide ranking of facilities reporting Dioxin and Dioxin-like Compounds, see pages 25-27.

For a statewide ranking of facilities reporting Mercury and Mercury Compounds, see pages 28-29.

For a statewide ranking of facilities reporting Lead and Lead Compounds, see pages 30-40.

For a statewide ranking of the number of facilities in each county reporting environmental releases, off-site transfers, and total chemicals managed, see pages 41-42.

For a statewide ranking of chemical air releases in pounds, see pages 71-72.

For a statewide ranking of air releases by hazard potential, see pages 73-74.

For an overview and explanation of the “core” set of chemicals reported from 1988-2003 see pages 50-58.

For information on pollution prevention activities at facilities and a sample of information available for your community, turn to pages 59-66. A complete listing is available from the Minnesota EPCRA Program (651-297-7372).

Is this information new?

No, the Toxic Release Inventory has been included in annual TRI reports since 1988 and the Pollution Prevention Progress Reports since 1995.

Who wrote this report?

All of the information in this report is collected by the Minnesota EPCRA Program in accord with the facility reporting requirements of SARA Title III, Section 313, and the requirements of the Minnesota Toxic Pollution Prevention Act.

Why is this report important?

1. It gives a facility a reason to review and evaluate its operations: Each facility that completes the reporting process has the opportunity to compare this year's chemical management processes to those of previous years. The facility may be able to determine if they have a chance to prevent pollution and reduce waste.
2. It gives a community a reason to discuss chemical issues: The information alerts citizens and facilities to chemical management activities in their communities and provides a forum to discuss chemicals and their risks.

Can this report tell me if I'm being harmed by chemicals?

No, this report is an annual summary of chemical management. Chemical risk depends on the toxicity of a chemical, the amount of a chemical to which you are exposed, and the length of the exposure. An annual summary cannot be used to determine chemical risk.

Does this report catalogue all toxic chemical management in the state?

No, this report only contains information on 419 facilities. These facilities are from select industrial classifications, have more than ten employees and use more than a specific amount of a reported chemical each year.

How were the reporting facilities selected?

The federal law designated the facilities. Minnesota expanded state reporting requirements in 1993.

Who should I contact if I want more information on a particular facility?

We recommend that you call our office at 651-297-7372 or visit our website at www.epcra.state.mn.us. We can provide information on chemical storage, management, releases and transfers, and pollution prevention. In addition, we can provide the names of contact persons at a facility.

I. Introduction

A. SARA Title III

On October 17, 1986, the federal "Superfund Amendments and Reauthorization Act (SARA)," was enacted into law. This statute, commonly referred to as SARA Title III, or the "Emergency Planning and Community Right-to-Know Act," is designed to help communities deal safely and effectively with the numerous hazardous chemicals used in our society. The law imposes a number of requirements on business and government intended to improve emergency planning for hazardous chemicals in their community. Although Title III has a number of provisions, the law has the following primary objectives.

- Identify the storage, use, and release of chemicals in communities.
- Foster communication between facilities that handle hazardous chemicals and their local communities.
- Expand emergency planning for hazardous chemical incidents.
- Enhance emergency response capabilities for hazardous chemical incidents.

An integral part of Title III is the requirement that local governments prepare an emergency plan. Under the law, this plan must identify the sources of the hazard, the community's susceptibility to damages should a hazardous chemical release occur, and the probability of damage taking place in a community. The emergency plan must also assess the preparedness and response capabilities of the community and describe the personnel, equipment, and procedures to be used in case of a hazardous chemical release. In Minnesota, the required Title III information is incorporated in the community's all-hazard emergency operations plan.

To enable communities to focus on chemicals and facilities of immediate concern, the U.S. Environmental Protection Agency has compiled a list of 355 "extremely" hazardous chemicals. Some common chemicals on this list are chlorine, ammonia, sulfuric acid, nitric acid, formaldehyde, hydroquinone, and many agricultural insecticides. Any facility (business, farm, public institution, municipality, individual, etc.) that stores any extremely hazardous chemical beyond a threshold amount must contact the Minnesota EPCRA Program and cooperate in the planning process. A list of these facilities is sent to counties and municipalities and is available for public inspection. Emergency plans focus on these facilities and on the routes likely to be used for the transportation of extremely hazardous chemicals.

Under the community right-to-know reporting requirements of Title III, facilities may be required to identify what hazardous chemicals are present on-site and in some cases what toxic chemicals are released into the environment. Facilities must submit inventories of the hazardous chemicals stored above specified amounts to the Minnesota EPCRA Program and local fire departments. Facilities also submit annual reports on the types, quantities, and location of hazardous chemicals. This information provides a basis for emergency planning and response and is accessible to the public.

Section 313 of the law deals with toxic chemical release reporting. Facilities which manufacture, process, or use certain toxic chemicals in excess of a specified amount, must submit annual reports on the amounts of toxic chemicals released into the air, water, and land or transferred off-site. This is the only multi-media data now being collected on toxic chemical releases and transfers. This toxic chemical release information is the focus of this report.

B. Minnesota EPCRA Program and Regional Review Committees

Title III is unique in that its effective implementation depends on the involvement of local and state government, business and industry, broadcast and news media, community groups, and citizens. The federal law requires each state to appoint a state emergency response commission. Minnesota's Emergency Response Commission was formed by Governor's Executive Order in 1987, and formally established by enactment of the Minnesota Emergency Planning and Community Right-to-Know Act (EPCRA) of 1989. The Commission had 18 members representing fire, law enforcement, medical services, business and industry, labor, community groups, elected officials, and four State agencies. Effective March 22, 2004, the powers and duties of the Commission were transferred to the Director of the Minnesota Division of Homeland Security and Emergency Management (HSEM), via Governor's Reorganization Order No. 191. This change did not negate in any way the requirement for regulated facilities to comply with the Emergency Planning and Community Right-to-Know Act, and HSEM's EPCRA Program staff continues to carry out their long-standing EPCRA responsibilities.

HSEM/HSEM's EPCRA Program staff responsibilities include the following:

- Coordinate Minnesota's all-hazard emergency planning process, including the EPCRA-related requirements;
- Appoint Regional Review Committee (see paragraph below) members, to ensure the detailed review of the EPCRA-related portions of local emergency operations plans;
- Provide particular chemical and facility information to local political subdivisions; as necessary to permit such subdivisions to develop and maintain current emergency operations plans;
- Establish procedures for receiving and processing public requests for information collected under Title III;
- Carry out compliance-related activities;
- Provide technical assistance; when possible; and
- Collect facility fees.

In 1989, the former Emergency Response Commission created seven Regional Review Committees (RRCs) that are charged with reviewing the all-hazard emergency operations plans developed by local governments, to assess whether such plans adequately address the emergency planning requirements contained in EPCRA. A RRC has nine members representing emergency response organizations, facilities regulated under law, and the public.

II. Summary of the 2003 Right-to-Know Chemical Information Report

Since 1987, manufacturing facilities that have 10 or more full-time employees and using quantities of listed chemicals above specified thresholds, have been required to file annual Toxic Release Inventory (TRI) reports on routine and accidental releases into the environment, and on chemical management activities. This information is submitted on an annual basis to both the Minnesota EPCRA Program and the U.S. Environmental Protection Agency (EPA) using the EPA Form R. In addition, the Minnesota Legislature required additional facilities in 14 non-manufacturing sectors to begin reporting in 1994. Lastly, the U.S. Environmental Protection Agency finalized a rule adding seven industry groups to the list of facilities subject to the TRI reporting requirements. Facilities in these groups began reporting in 1998.

In 1990, the Minnesota Legislature enacted the Minnesota Toxic Pollution Prevention Act. The Act requires each TRI facility reporting toxic chemical releases and transfers on EPA Form R to develop a toxic pollution prevention plan. The plan is used by facilities to establish goals for reducing or eliminating releases and transfers of these chemicals. In addition, these facilities must submit annual progress reports to the Minnesota EPCRA Program.

The Minnesota EPCRA Program maintains a Toxic Release Inventory and pollution prevention database. Information from the database is available to the public and is used to compile this report. The following is a summary of Toxic Release Inventory and pollution prevention progress report information reported to the Minnesota EPCRA Program for calendar year 2003:

In 2003, 419 facilities reported releases of 31.8 million pounds to the environment, while the total amount of chemicals managed was 355 million pounds. This compares to 425 facilities reporting 30.9 million pounds of environmental releases in 2002 with 316 million pounds of chemicals being managed. In 2001, 432 facilities reported 32.5 million pounds of environmental releases and 321.1 million pounds of chemicals managed (Figures 1 & 3). For the 2003 reporting year, 121 facilities have made use of the "Alternate Threshold Option". This allows facilities to submit a Certification Statement instead of the EPA Form R for those chemicals with minimal amounts of releases, transfers, and/or total chemicals managed.

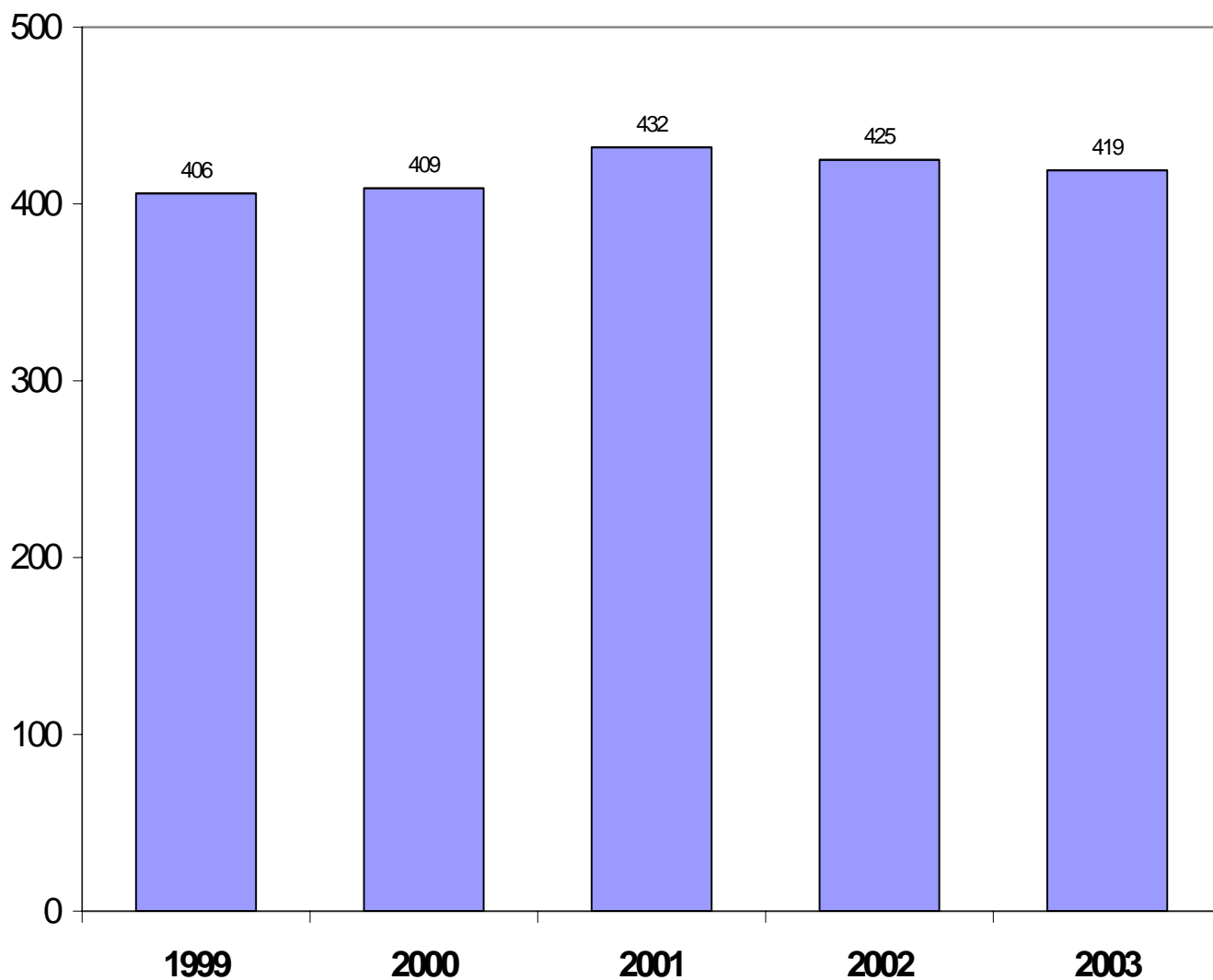
Based on the ranking in Part IV, Attachment 1, the top twenty facilities account for approximately 60% of total environmental releases. Based on the ranking in Part IV, Attachment 2, the top twenty facilities account for 88% of total chemicals managed. The chemicals most commonly *managed* were Lead Compounds, Ammonia, Methanol, Methyl Ethyl Ketone, and Toluene. The chemicals most commonly *released* to the environment were Barium Compounds, Copper Compounds, Ammonia, Manganese Compounds and N-Hexane.

377 facilities filed 1167 Pollution Prevention Progress Reports for 2003. Each Progress Report represents a pollution prevention objective for a chemical. Of the reports filed, 40% established a numerical objective and 60% established non-numeric objectives. 62% of the Progress Reports indicated the objectives have been met and 38% of the reports indicated the objectives have not been met or it was not possible to determine if the objectives have been met. The most commonly listed barriers to pollution prevention were; technical limitations of the production process, concerns that product quality may decline as a result of source reduction, and that pollution prevention was previously implemented, therefore, additional reduction does not appear to be technically feasible.

The top three chemicals in terms of total pounds of air releases were Ammonia, N-Hexane and Methanol. The top three chemicals in terms of hazard potential were Mercury, Lead and Copper.

III. Summary of Chemical Information Reported Under SARA Title III

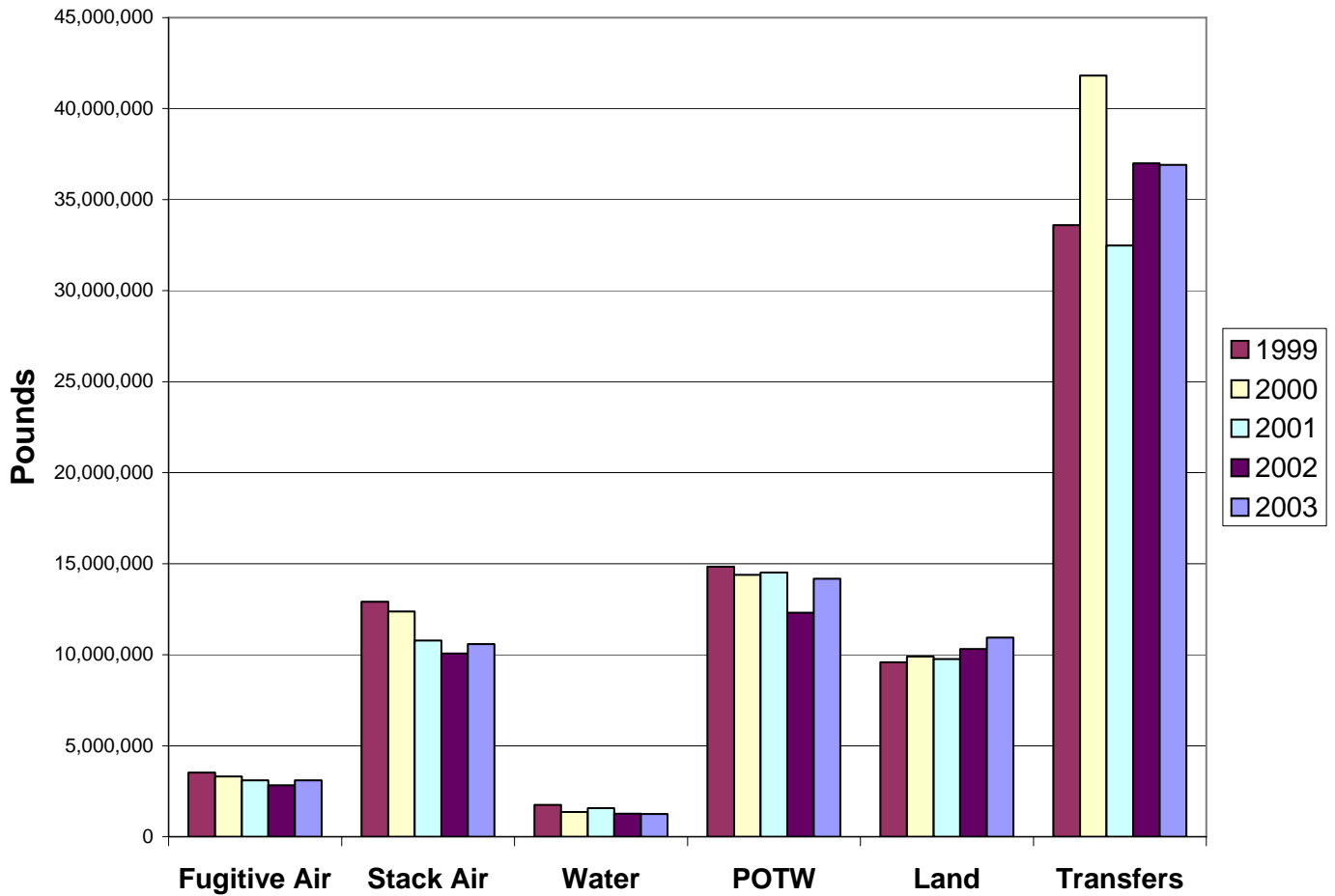
Figure 1: Number of Facilities reporting under SARA Title III, Section 313



2003 Right-To-Know Chemical Information Report

Minnesota EPCRA Program

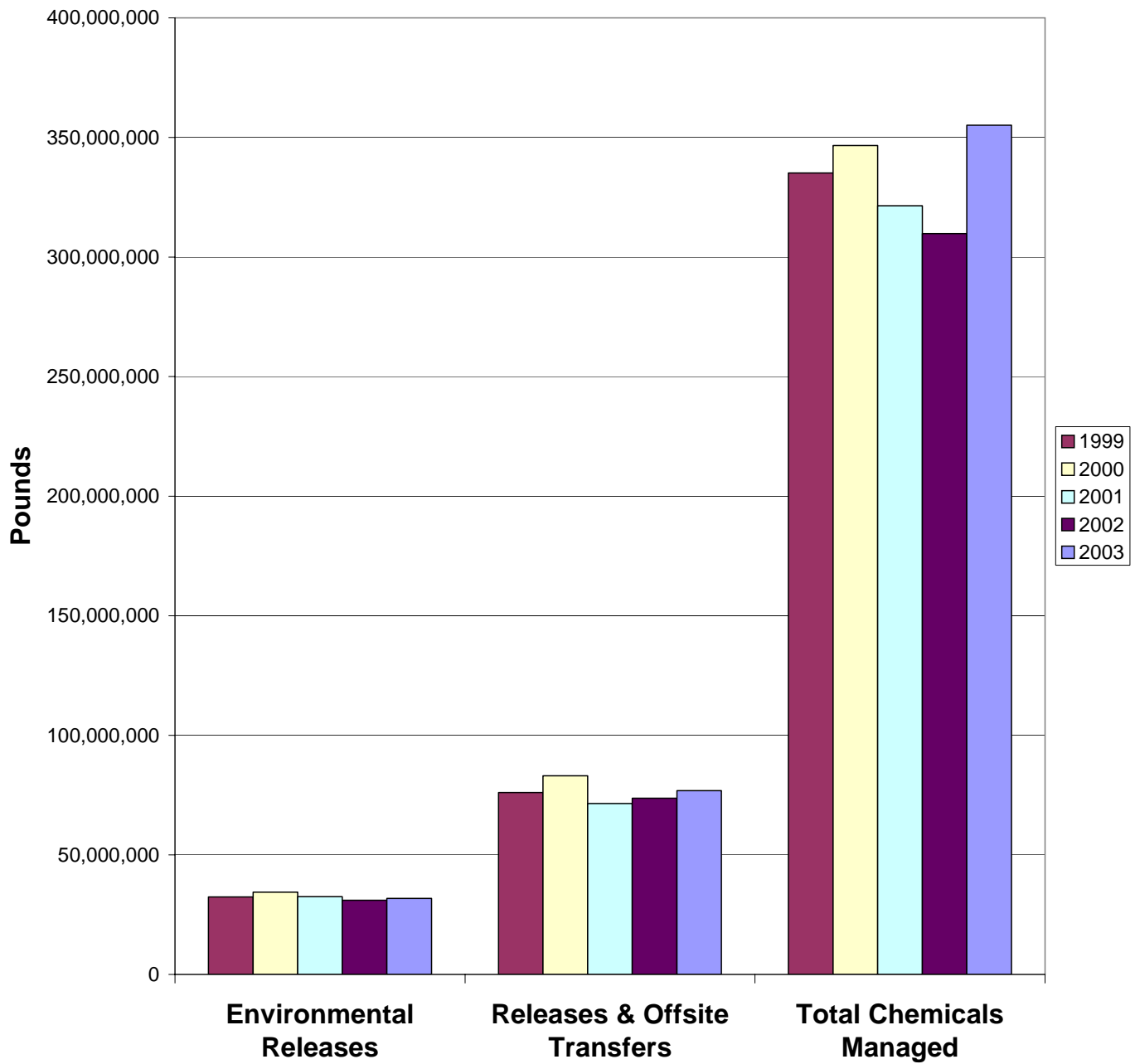
Figure 2: Total Releases and Transfers by Medium (Sections 5 & 6 of Form R)



2003 Right-To-Know Chemical Information Report

Minnesota EPCRA Program

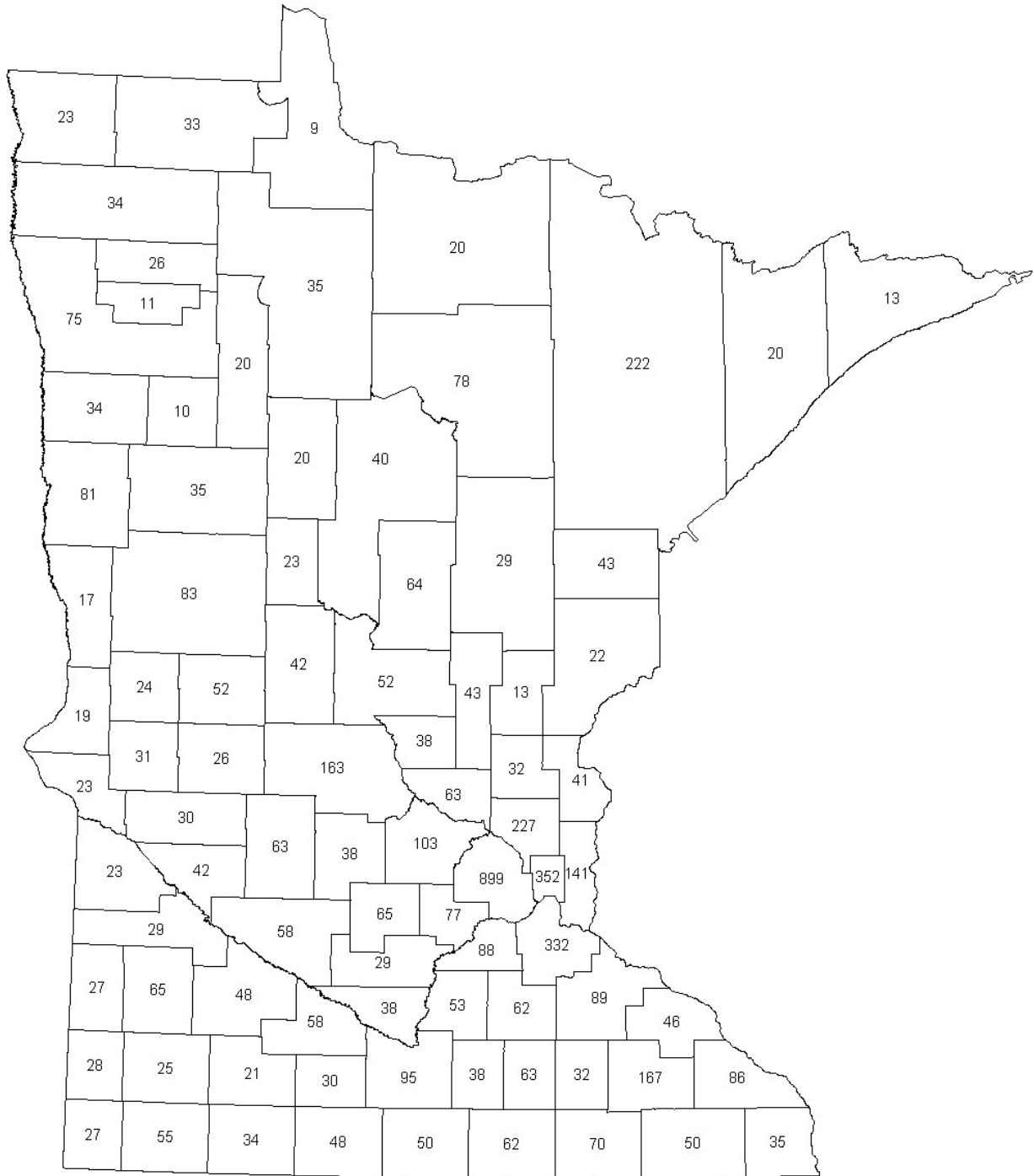
Figure 3: Environmental Releases and Chemical Management (Section 8, Form R)



2003 Right-To-Know Chemical Information Report

Minnesota EPCRA Program

Figure 5: Facilities Filing Chemical Storage Reports (Tier II) by County



2003 Right-To-Know Chemical Information Report

Minnesota EPCRA Program

IV. Overview of the Toxic Chemical Release Inventory (TRI)

The annual Toxic Chemical Release Inventory (TRI) contains the amounts of toxic chemicals reported by facilities as being released into the environment, transferred off-site for treatment, recycling, energy recovery, and disposal, and managed on-site at the facility. Section 313 of Title III requires these annual reports for over 600 chemicals. The TRI data in this summary covers submittals for 2003. Reports from manufacturing facilities are submitted to both the Minnesota EPCRA Program and the U.S. Environmental Protection Agency using the EPA Form R. Facilities included in the Minnesota TRI expansion are only required to submit the Form R to the Minnesota EPCRA Program.

The data reported is not necessarily derived from actual monitoring or measurements, but may be estimated from engineering calculations, material balance calculations, or published emission factors. The following sections describe the reporting and facilities required to report.

- Section 5 of the Form R is used to report releases to air, land, and water.
- Section 6 is used to report transfers to Publicly Owned Treatment Works and other off-site treatment, recycling, energy recovery, and disposal locations. In reporting years prior to 1991, the amount of a chemical sent off-site for recycling or energy recovery did not have to be reported on the Form R.
- Section 7 of the Form R is used to report on-site waste treatment methods and efficiency, on-site energy recovery processes, and on-site recycling processes.
- Section 8 of the Form R includes the amount of a toxic chemical released, recycled, treated, and used for energy recovery at the facility, and the amount sent to off-site locations.

The summary figures in this report contain information from Sections 5, 6 and 8 of the Form R. The facility listings in this report contain information from Section 8 only.

A. Facilities Covered

A plant, factory, or other facility must report to EPA and Minnesota EPCRA Program under Section 313 if it meets the following requirements:

- 1) if it conducts manufacturing operations (that is, if it is included in the following Standard Industrial Classification (SIC) codes 20 through 39);

- 20XX Food and Kindred Products
- 21XX Tobacco Manufacturers
- 22XX Textile Mill Products
- 23XX Apparel and other Textile Products
- 24XX Lumber and Wood Products
- 25XX Furniture and Fixtures
- 26XX Paper and Allied Products
- 27XX Printing and Publishing
- 28XX Chemicals and Allied Products
- 29XX Petroleum Refining
- 30XX Rubber and Miscellaneous Plastic Products

- 31XX Leather and Leather Products
- 32XX Stone, Clay, and Glass Products
- 33XX Primary Metal Industries
- 34XX Fabricated Metal Products
- 35XX Industrial, Commercial Machinery and Computers
- 36XX Electronic Equipment and Components
- 37XX Transportation Equipment
- 38XX Instruments and Related Products
- 39XX Miscellaneous Manufacturing Industries

The U.S. Environmental Protection Agency (EPA) finalized a rule adding seven industry groups to the list of facilities subject to the TRI reporting requirements. Facilities in the following SIC Codes, which meet the employee and chemical usage criteria, and are not eligible for specific exemptions available under the federal Act, must report chemical releases and transfers to the EPA and Minnesota EPCRA Program. Reports from these facilities were first received by July 1, 1999, covering releases and transfers for the 1998 reporting year:

<u>SIC Code</u>	<u>Industry</u>
10 (except 1011, 1081, and 1094)	Metal mining
12 (except 1241)	Coal mining
4911, 4931 and 4939 (each limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce)	Electric utilities
4953 (limited to facilities regulated under subtitle C of RCRA)	Commercial hazardous waste treatment
5169	Chemical and allied products-wholesale
5171	Petroleum bulk terminals and plants-wholesale
7389 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis)	Solvent recovery services

- 2) if, in addition, it has 10 or more full-time equivalent employees; and
- 3) if, in addition to the above, it manufactures, imports, processes, or in any other way uses any of the toxic chemicals listed on pages 82 to 97 in amounts greater than the "threshold" quantities. Threshold quantities have been established at 25,000 pounds or 10,000 pounds per chemical per year, depending on how the chemical is used at the facility. Persistent, bioaccumulative and toxic (PBT) chemicals have lower thresholds.

B. State TRI Expansion

The 1993 Minnesota Legislature amended the Minnesota Emergency Planning and Community Right-to-Know Act to expand the toxic chemical release reporting requirements. Facilities in the following SIC Codes, which meet the employee and chemical usage criteria, and are not eligible for specific exemptions available under the federal Act, must report chemical releases and transfers to the Minnesota EPCRA Program. Reports for the expanded group of facilities were first received by July 1, 1994, covering releases and transfers for the 1993 reporting year:

<u>SIC Code</u>	<u>Industry</u>
10	Metal Mining
40	Rail Transport
45	Air Transport
49	Utilities
5161/5169	Chemical and Allied Products
5162	Basic Shapes
806	Hospitals
807	Medical and Dental Laboratories
822	Colleges and Universities
7384	Photo Finishing
7389	Solvent Recovery Facilities only
8734	Testing Laboratories
9223	Correctional Institutions

Section 313 of the Act was written primarily for the manufacturing sector. In order to effectively implement the new legislation, the Minnesota EPCRA Program had to make certain interpretations of the federal Act as it applied to the Minnesota expansion. For example, the Minnesota EPCRA Program has not received any reports from SIC Codes 807 and 8734 because of the exemption of these types of laboratories under the federal Act.

The legislation does have some differences when compared to the federal Act as follows:

- The state Act does not apply to substances that are associated with or incidental to the combustion of fossil fuels or other fuels for the generation of electricity or the production of steam.
- A person may petition the Director to exempt all facilities included in one of the 14 Standard Industrial Classifications listed above, or a sub-class within one of the listed classifications, from the reporting requirements. The Minnesota EPCRA Program can provide petition criteria which will be evaluated and acted upon.

The former Emergency Response Commission received a petition from SIC Code 1011 (Iron Ore Mining) requesting an exemption from Toxic Release Inventory reporting. Staff recognized that the mining techniques practiced by the Minnesota facilities within SIC 1011 do not meet the reporting requirements as established in the federal Act. The former Commission accepted the petition based on the recommendation from staff. Based on the former Commission's findings, EPA did not include SIC Code 1011 in the federal TRI expansion. In addition, the former Commission received and approved a petition from the University of Minnesota submitted on behalf of all colleges and universities. The petition requested a limited exemption from TRI reporting at those university facilities using Ammonia as an agricultural nutrient.

A facility meeting all of the reporting requirements under the Minnesota expansion, but reporting no releases or transfers, may submit a written certification to the Director of Homeland Security and Emergency Management exempting itself from the reporting requirements.

C. Limits on Application of TRI Data

The TRI data does provide important information about the industrial sources of environmental releases of toxic chemicals. However, users of the TRI data should understand the limitations of the data. The TRI data covers only a portion of toxic chemical emissions, and the amounts reported are estimated with unknown accuracy.

Toxic chemicals are generated from a variety of sources, including manufacturing and non-manufacturing processes, agricultural and urban uses of chemicals, use and disposal of consumer products, and mobile sources such as automobiles. The TRI does not require facilities to measure or otherwise verify the data they submit. Thus, much of the quantitative data reported were estimated.

The TRI data has useful applications. The Minnesota Pollution Control Agency can crosscheck the TRI data with environmental discharge permits and hazardous waste disclosure reports. The data can also provide additional information in prioritizing environmental regulatory efforts. Again, it is important to realize that a release of a TRI toxic chemical does not indicate a violation of federal, state, or local environmental laws.

Another application is to use the data to promote pollution prevention and waste reduction. The data can assist in targeting technical assistance toward facilities that have the most significant emissions and promote transfer of prevention technology among industries. In addition, the data provide a baseline measurement to assess future reductions.

Finally, the data can be used as a risk screening tool to delineate "hot spot" areas where additional health assessments may be necessary.

D. Exposure and Risk

The 31 million pounds of chemical releases directly to the air, water, and land and the 355 million pounds of chemicals managed in 2003 are not necessarily an indicator of human and environmental exposure to these chemicals. Several factors determine the impact of releases and transfers on public health and the environment. A chemical risk involves the toxicity of a substance and the exposure to it.

In all cases, more information than the TRI can provide is needed to assess potential exposure and risk concerns. The magnitude, duration, and frequency of exposure to a toxic chemical is necessary to assess the human response to the exposure. The TRI data are in amounts or volumes of annual emissions. These numbers do not address the quantities emitted per day or whether releases are continuous or intermittent. Therefore, the TRI can only indicate toxic chemicals that may be of concern and which require further attention and analysis.

For additional information about toxic chemicals reported under the TRI and Pollution Prevention Progress Reports, contact the Minnesota EPCRA Program at (651) 297-7372.

E. Minnesota Toxic Pollution Prevention Act

The 1990 Minnesota Legislature passed the Minnesota Toxic Pollution Prevention Act. The legislation includes these major features:

1. Establishes state policy encouraging the prevention of toxic pollution.
2. Provides technical assistance to help companies prevent toxic pollution by expanding the responsibilities and staff of the Minnesota Technical Assistance Program (MnTAP).
3. Provides matching grants to help companies study or demonstrate the feasibility of applying specific technologies and methods to prevent pollution.
4. Requires each facility reporting toxic chemical releases to develop a toxic pollution prevention plan establishing goals for reducing or eliminating these releases. In addition, these facilities must submit annual progress reports to the Minnesota EPCRA Program. A sample of the information available from these progress reports is included in this report on page 66. A complete listing is available from the Minnesota EPCRA Program (651-297-7372).

While citizens throughout the nation have a right to know what chemicals are stored and released from a facility, Minnesota citizens also have a right to know what steps facilities are taking to reduce or eliminate the release of toxic pollutants.

For more information on the Minnesota Toxic Pollution Prevention Act, contact the Office of Environmental Assistance at (651) 296-3417. For more information on the progress reports, contact the Minnesota EPCRA Program at 651-297-7372.

F. Public Access to TRI Data

The Toxic Release Inventory is updated annually. TRI reports filed for 1987-2003 are available from a number of sources. The Minnesota EPCRA Program will make data from individual facilities in Minnesota available at its office located at: 444 Cedar Street, Suite 223, St. Paul, MN 55101, through its website at www.epcra.state.mn.us or by calling 651-297-7372. For TRI information covering all fifty states, please contact the U.S. Environmental Protection Agency through its Information Center at 1-800-424-9346 or visit their website at www.epa.gov/tri.

**Attachment 1: Top 20 Facilities Ranked By Total Chemicals Released
(Section 8.1) for Calendar Year 2003**

Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, of EPA Form "R"

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program**

(Amount in Pounds)

Facility	Released On-Site (8.1A, 8.1B)	Released Off-Site (8.1C,8.1D)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Chemicals Managed
XCEL ENERGY - SHERCO PLANT 13999 INDUSTRIAL BLVD BECKER, MN 55308	<u>7,198,577</u>	<u>2,704</u>	0	0	0	0	710,810	0	7,912,091
GERDAU AMERISTEEL RECYCLING - ST. PAUL 1678 RED ROCK RD ST. PAUL, MN 55165	<u>275</u>	<u>3,076,144</u>	0	0	1,094,000	19	0	0	4,170,438
MINNESOTA POWER - BOSWELL ENERGY CENTER 1210 NW 3RD ST COHASSET, MN 55721	<u>2,069,214</u>	<u>14</u>	0	0	0	0	134,000	0	2,203,228
XCEL ENERGY - A.S. KING GENERATING PLANT 1103 KING PLANT RD BAYPORT, MN 55003	<u>172,011</u>	<u>861,084</u>	0	0	0	0	142,688	0	1,175,782
3M COTTAGE GROVE CENTER 10746 INNOVATION RD COTTAGE GROVE, MN 55016	<u>613,940</u>	<u>324,300</u>	453	0	0	4,109,817	20,189,614	2,440	25,240,564
XCEL ENERGY - BECKER RDF ASH LANDFILL 13700 SHERBURNE AVE. SOUTH BECKER, MN 55308	<u>834,530</u>	<u>716</u>	0	0	0	0	0	14	835,260
FLINT HILLS RESOURCES, LP JUNCTION OF HWY 52 & 55 INVER GROVE HEIGHTS, MN 55077	<u>831,002</u>	<u>4,240</u>	0	366	289,564	56,728	32,142,815	1,295	33,326,011
SAPPI CLOQUET LLC 2201 AVE B CLOQUET, MN 55720	<u>701,406</u>	<u>37,197</u>	573,955	0	0	0	5,711,289	6,576,288	13,600,135
AINSWORTH ENGINEERED (USA) LLC 29647 U.S. HWY. 2 BEMIDJI, MN 56601	<u>716,637</u>	<u>0</u>	0	0	0	0	0	0	716,637
ELECTROLUX HOME PRODUCTS 701 33RD AVENUE NORTH ST. CLOUD, MN 56303	<u>657,015</u>	<u>22,000</u>	0	0	0	39,000	0	0	718,015

**Attachment 1: Top 20 Facilities Ranked By Total Chemicals Released
(Section 8.1) for Calendar Year 2003**

Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, of EPA Form "R"

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program**

(Amount in Pounds)

Facility	Released On-Site (8.1A, 8.1B)	Released Off-Site (8.1C,8.1D)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Chemicals Managed
BOISE WHITE PAPER, LLC 400 2ND ST INTL FALLS, MN 56649	<u>569,295</u>	<u>13,600</u>	360,000	0	0	0	7,919,200	0	8,862,095
CHS OILSEED PROCESSING 2020 S RIVERFRONT DR MANKATO, MN 56002-3247	<u>530,255</u>	<u>0</u>	0	0	0	20,200	0	500	550,955
FORD - TWIN CITIES ASSEMBLY PLANT 966 S MISSISSIPPI RIVER BLVD ST. PAUL, MN 55116	<u>500,257</u>	<u>19,400</u>	0	7,357	0	620,945	407,250	43,900	1,599,109
3M HUTCHINSON 915 ADAMS ST SE HUTCHINSON, MN 55350-9431	<u>461,533</u>	<u>824</u>	0	0	11,997,800	5,288	3,570,000	1,986,000	18,021,444
XCEL ENERGY - RIVERSIDE PLANT 3100 MARSHALL ST NE MINNEAPOLIS, MN 55418	<u>70,930</u>	<u>388,056</u>	0	0	0	0	109,000	0	567,986
ROCHESTER PUBLIC UTILITIES - SILVER LAKE 425 W SILVER LAKE DRV NE ROCHESTER, MN 55906-3675	<u>429,595</u>	<u>1,034</u>	0	0	0	0	0	0	430,629
LARSON GLASTRON BOATS, INC. 700 PAUL LARSON MEMORIAL DRV LITTLE FALLS, MN 56345-1100	<u>403,190</u>	<u>0</u>	0	0	0	0	0	0	403,190
CROWN FOOD PACKAGING 2929 WEST BRIDGE STREET OWATONNA, MN 55060	<u>397,000</u>	<u>0</u>	0	0	0	0	0	0	397,000
CHS OILSEED PROCESSING 1833 130TH ST FAIRMONT, MN 56031	<u>350,000</u>	<u>0</u>	0	0	0	0	0	75	350,075
GOPHER RESOURCE CORP. 3385 S HWY 149 EAGAN, MN 55121	<u>2,205</u>	<u>327,120</u>	0	0	176,543,450	0	0	0	176,872,775

**Attachment 2: Top 20 Facilities Ranked By Total Chemicals Managed
(Sections 8.1-8.7) for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)**

Facility	Released On-Site (8.1A, 8.1B)	Released Off-Site (8.1C,8.1D)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Chemicals Managed
GOPHER RESOURCE CORP. 3385 S HWY 149 EAGAN, MN 55121	2,205	27,120	0	0	176,543,450	0	0	0	<u>176,872,775</u>
FLINT HILLS RESOURCES, LP JUNCTION OF HWY 52 & 55 INVER GROVE HEIGHTS, MN 55077	831,002	4,240	0	366	289,564	56,728	32,142,815	1,295	<u>33,326,011</u>
3M COTTAGE GROVE CENTER 10746 INNOVATION RD COTTAGE GROVE, MN 55016	613,940	324,300	453	0	0	4,109,817	20,189,614	2,440	<u>25,240,564</u>
3M HUTCHINSON 915 ADAMS ST SE HUTCHINSON, MN 55350-9431	461,533	824	0	0	11,997,800	5,288	3,570,000	1,986,000	<u>18,021,444</u>
SAPPI CLOQUET LLC 2201 AVE B CLOQUET, MN 55720	701,406	37,197	573,955	0	0	0	5,711,289	6,576,288	<u>13,600,135</u>
BOISE WHITE PAPER, LLC 400 2ND ST INTL FALLS, MN 56649	569,295	13,600	360,000	0	0	0	7,919,200	0	<u>8,862,095</u>
XCEL ENERGY - SHERCO PLANT 13999 INDUSTRIAL BLVD BECKER, MN 55308	7,198,577	2,704	0	0	0	0	710,810	0	<u>7,912,091</u>
FEDERAL CARTRIDGE COMPANY 900 EHLEN DRV ANOKA, MN 55303	48	65,456	0	0	903,600	4,603,490	4,524	520,947	<u>6,098,065</u>

**Attachment 2: Top 20 Facilities Ranked By Total Chemicals Managed
(Sections 8.1-8.7) for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)**

Facility	Released On-Site (8.1A, 8.1B)	Released Off-Site (8.1C,8.1D)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Chemicals Managed
GERDAU AMERISTEEL - ST. PAUL 1678 RED ROCK RD ST. PAUL, MN 55119	9,846	19	0	0	233,081	4,496,315	0	0	<u>4,739,261</u>
GERDAU AMERISTEEL RECYCLING - ST. PAUL 1678 RED ROCK RD ST. PAUL, MN 55165	275	3,076,144	0	0	1,094,000	19	0	0	<u>4,170,438</u>
FILMTEC CORP. 7200 OHMS LANE EDINA, MN 55439	13,521	0	0	0	0	0	0	3,775,424	<u>3,788,945</u>
MINNESOTA POWER - BOSWELL ENERGY CENTER 1210 NW 3RD ST COHASSET, MN 55721	2,069,214	14	0	0	0	0	134,000	0	<u>2,203,228</u>
WATER GREMLIN CO. 1610 WHITAKER AVE WHITE BEAR LAKE, MN 55110	19,785	0	0	0	95,040	1,959,433	0	0	<u>2,074,258</u>
FORD - TWIN CITIES ASSEMBLY PLANT 966 S MISSISSIPPI RIVER BLVD ST. PAUL, MN 55116	500,257	19,400	0	7,357	0	620,945	407,250	43,900	<u>1,599,109</u>
MULTEK FLEXIBLE CIRCUITS, INC. - EAST FACILITY 805 HWY 3 N NORTHFIELD, MN 55057	43,971	8,055	0	259,367	0	402,411	813,499	35,295	<u>1,562,598</u>

**Attachment 2: Top 20 Facilities Ranked By Total Chemicals Managed
(Sections 8.1-8.7) for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)**

Facility	Released On-Site (8.1A, 8.1B)	Released Off-Site (8.1C,8.1D)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Chemicals Managed
XCEL ENERGY - A.S. KING GENERATING PLANT 1103 KING PLANT RD BAYPORT, MN 55003	172,011	861,084	0	0	0	0	142,688	0	<u>1,175,782</u>
DAVISCO LE SUEUR CHEESE DIVISION 719 N MAIN ST LE SUEUR, MN 56058	0	0	0	0	552,897	0	433,755	50,584	<u>1,037,236</u>
MARATHON ASHLAND PETROLEUM, LLC 300 3RD STREET ST. PAUL PARK, MN 55071	180,551	4,506	0	8,310	477,642	6,287	342,711	24	<u>1,020,031</u>
MELROSE DAIRY PROTEINS, LLC 1000 E KRAFT DRV MELROSE, MN 56352	1,434	23	24,185	0	0	0	493,095	486,640	<u>1,005,377</u>
AL-CORN CLEAN FUEL 797 5TH ST, PO BOX 6 CLAREMONT, MN 55924	22,510	0	0	0	0	0	969,006	0	<u>991,516</u>

**Attachment 3: Top 20 Facilities Ranked by
Total Air Releases for Calendar Year 2003
Sections 5.1 and 5.2 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program**

County	Facility	(Amount in Pounds)		Total Air
		Fugitive Air	Stack Air	
Hubbard	AINSWORTH ENGINEERED (USA) LLC 29647 U.S. HWY. 2 BEMIDJI, MN 56601	163	716,474	716,637
Stearns	ELECTROLUX HOME PRODUCTS 701 N 33RD AVE ST. CLOUD, MN 56303	591,000	66,015	657,015
Koochiching	BOISE WHITE PAPER, LLC 400 2ND ST INTL FALLS, MN 56649	40,105	506,395	546,500
Blue Earth	CHS OILSEED PROCESSING 2020 S RIVERFRONT DR MANKATO, MN 56002-3247	53,000	477,000	530,000
Ramsey	FORD - TWIN CITIES ASSEMBLY PLANT 966 S MISSISSIPPI RIVER BLVD ST. PAUL, MN 55116	23,746	477,351	501,097
Carlton	SAPPI CLOQUET LLC 2201 AVE B CLOQUET, MN 55720	18,491	465,818	484,309
McLeod	3M HUTCHINSON 915 ADAMS ST SE HUTCHINSON, MN 55350-9431	15,443	445,903	461,346
Olmsted	ROCHESTER PUBLIC UTILITIES - SILVER LAKE 425 W SILVER LAKE DRV NE ROCHESTER, MN 55906-3675	6	429,589	429,595
Morrison	LARSON GLASTRON BOATS, INC. 700 PAUL LARSON MEMORIAL DRV LITTLE FALLS, MN 56345-1100	403,190	0	403,190
Steele	CROWN FOOD PACKAGING 2929 WEST BRIDGE STREET OWATONNA, MN 55060	100,000	297,000	397,000
Martin	CHS OILSEED PROCESSING 1833 130TH ST FAIRMONT, MN 56031	35,000	315,000	350,000
Dakota	FLINT HILLS RESOURCES, LP JUNCTION OF HWY 52 & 55 INVER GROVE HEIGHTS, MN 55077	136,475	164,285	300,760
Lac Qui Parle	AG PROCESSING, INC. 800 DIAGONAL ST DAWSON, MN 56232	20,000	266,000	286,000

**Attachment 3: Top 20 Facilities Ranked by
Total Air Releases for Calendar Year 2003
Sections 5.1 and 5.2 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program**

(Amount in Pounds)

County	Facility	Fugitive Air	Stack Air	Total Air
Polk	AMERICAN CRYSTAL SUGAR CO. - EAST GRAND FORKS BUSINESS HWY 2 E EAST GRAND FORKS, MN 56721	250	280,740	280,990
Ramsey	REXAM BEVERAGE CAN COMPANY 139 EVA ST ST. PAUL, MN 55107	36,095	221,113	257,208
Todd	CENTRAL BI-PRODUCTS 25498 US HWY 71 LONG PRAIRIE, MN 56347	254,000	750	254,750
Redwood	CENTRAL BI-PRODUCTS 33361 COUNTY ROAD 25 REDWOOD FALLS, MN 56283	253,000	1,005	254,005
Blue Earth	ADM CO. 2019 3RD AVE MANKATO, MN 56001	15,865	210,851	226,716
Polk	AMERICAN CRYSTAL SUGAR CO. - CROOKSTON HWY 75 S BOX 600 CROOKSTON, MN 56716	0	226,369	226,369
Renville	SOUTHERN MN BEET SUGAR COOP 83550 CO RD 21 RENVILLE, MN 56284	3,100	217,678	220,778

**Attachment 4: Statewide Listing of Amount of Releases,
Transfers and Total Dioxin and Dioxin-like Compounds
Managed for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Grams)**

Sorted by County, City, Facility	Released On-Site (8.1a,8.1b)	Released Off-Site (8.1c,8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>BELTRAMI County, City of SOLWAY</u>									
NORBORD MINNESOTA --- 4409 NORTHWOOD ROAD NW DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.08	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.26
<u>BENTON County, City of SARTELL</u>									
INTERNATIONAL PAPER CO. --- 100 E SARTELL ST DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.10	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.13
<u>BLUE EARTH County, City of MANKATO</u>									
ADM CO. --- 2019 3RD AVE DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
<u>CARLTON County, City of CLOQUET</u>									
SAPPI CLOQUET LLC --- 2201 AVE B DIOXIN AND DIOXIN-LIKE COMPOUNDS	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.24	3.56
<u>CHISAGO County, City of NORTH BRANCH</u>									
ZINPRO CORPORATION --- 6375 415TH STREET DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<u>CLAY County, City of MOORHEAD</u>									
AMERICAN CRYSTAL SUGAR CO. - MOORHEAD --- 2500 N 11TH ST DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
<u>COOK County, City of SCHROEDER</u>									
TACONITE HARBOR ENERGY CENTER --- 8124 WEST HWY 61 DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
<u>CROW WING County, City of DEERWOOD</u>									
TRUS JOIST - A WEYERHAEUSER BUSINESS --- 19586 CO RD 102 DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.11	0.09	0.00	0.00	0.00	0.19	0.00	0.00	0.39
<u>DAKOTA County, City of BURNSVILLE</u>									
XCEL ENERGY - BLACK DOG PLANT --- 1400 E BLACK DOG RD DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
<u>DAKOTA County, City of EAGAN</u>									
GOPHER RESOURCE CORP. --- 3385 S HWY 149 DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
<u>DAKOTA County, City of INVER GROVE HEIGHTS</u>									
FLINT HILLS RESOURCES, LP --- JUNCTION OF HWY 52 & 55 DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02

**Attachment 4: Statewide Listing of Amount of Releases,
Transfers and Total Dioxin and Dioxin-like Compounds
Managed for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Grams)**

Sorted by County, City, Facility	Released On-Site (8.1a,8.1b)	Released Off-Site (8.1c,8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>DAKOTA County, City of ROSEMOUNT</u>									
SPECTRO ALLOYS CORP. --- 13220 DOYLE PATH									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	4.59	20.26	0.00	0.00	0.00	0.00	0.00	0.00	24.85
<u>HENNEPIN County, City of MINNEAPOLIS</u>									
XCEL ENERGY - RIVERSIDE PLANT --- 3100 MARSHALL ST NE									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
<u>HUBBARD County, City of BEMIDJI</u>									
AINSWORTH ENGINEERED (USA) LLC --- 29647 U.S. HWY. 2									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
<u>ITASCA County, City of COHASSET</u>									
MINNESOTA POWER - BOSWELL ENERGY CENTER --- 1210 NW 3RD ST									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
<u>ITASCA County, City of GRAND RAPIDS</u>									
BLANDIN PAPER --- 115 1ST ST SW									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.00	13.00
<u>KOOCHICHING County, City of BIG FALLS</u>									
PAGE & HILL FOREST PRODUCTS, INC. --- 7556 CTY RD 31									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.00	0.00	0.00	107.19	0.00	0.00	0.00	0.00	107.19
<u>KOOCHICHING County, City of INTL FALLS</u>									
BOISE WHITE PAPER, LLC --- 400 2ND ST									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.12	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.18
<u>POLK County, City of CROOKSTON</u>									
AMERICAN CRYSTAL SUGAR CO. - CROOKSTON --- HWY 75 S BOX 600									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
<u>POLK County, City of EAST GRAND FORKS</u>									
AMERICAN CRYSTAL SUGAR CO. - EAST GRAND FORKS --- BUSINESS HWY 2 E									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
<u>RAMSEY County, City of NEW BRIGHTON</u>									
BELL LUMBER & POLE CO. --- 778 1ST ST NW									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.00	197.81	0.00	0.00	0.00	0.00	10.33	54.57	262.71
<u>RAMSEY County, City of ST. PAUL</u>									
XCEL ENERGY - HIGH BRIDGE PLANT --- 501 SHEPARD RD									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14

**Attachment 4: Statewide Listing of Amount of Releases,
Transfers and Total Dioxin and Dioxin-like Compounds
Managed for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Grams)**

Sorted by County, City, Facility	Released On-Site (8.1a,8.1b)	Released Off-Site (8.1c,8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>RENVILLE County, City of RENVILLE</u>									
SOUTHERN MN BEET SUGAR COOP --- 83550 CO RD 21 DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.12	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.24
<u>SHERBURNE County, City of BECKER</u>									
XCEL ENERGY - BECKER RDF ASH LANDFILL --- 13700 SHERBURNE AVE. SOUTH DIOXIN AND DIOXIN-LIKE COMPOUNDS	784.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	784.71
<u>SHERBURNE County, City of BECKER</u>									
XCEL ENERGY - SHERCO PLANT --- 13999 INDUSTRIAL BLVD DIOXIN AND DIOXIN-LIKE COMPOUNDS	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80
<u>ST LOUIS County, City of HIBBING</u>									
HIBBING PUC --- 1832 SIXTH AVENUE EAST DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
<u>WASHINGTON County, City of BAYPORT</u>									
XCEL ENERGY - A.S. KING GENERATING PLANT --- 1103 KING PLANT RD DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
<u>WASHINGTON County, City of COTTAGE GROVE</u>									
3M COTTAGE GROVE CENTER --- 10746 INNOVATION RD DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
Grand Totals:	798.08	218.40	0.00	107.19	0.00	0.34	10.33	67.81	983.75

**Attachment 5: Statewide Listing of Amount of Releases,
Transfers and Total Mercury and Mercury Compounds
Managed for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)**

Sorted by County, City, Facility	Released On-site (8.1a, 8.1b)	Released Off-site (8.1c, 8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>BECKER County, City of DETROIT LAKES</u>									
MERCURY	36	0	0	0	0	0	0	0	36
<u>BENTON County, City of SARTELL</u>									
INTERNATIONAL PAPER CO. --- 100 E SARTELL ST									
MERCURY COMPOUNDS	17	0	0	0	0	2	0	0	19
<u>BLUE EARTH County, City of MANKATO</u>									
ADM CO. --- 2019 3RD AVE									
MERCURY COMPOUNDS	6	0	0	0	0	0	0	0	6
<u>CARLTON County, City of CLOQUET</u>									
SAPPI CLOQUET LLC --- 2201 AVE B									
MERCURY	17	2	0	0	0	0	0	0	19
<u>COOK County, City of SCHROEDER</u>									
TACONITE HARBOR ENERGY CENTER --- 8124 WEST HWY 61									
MERCURY COMPOUNDS	62	0	0	0	0	0	0	0	62
<u>DAKOTA County, City of BURNSVILLE</u>									
XCEL ENERGY - BLACK DOG PLANT --- 1400 E BLACK DOG RD									
MERCURY COMPOUNDS	53	1	0	0	0	0	0	0	54
<u>DAKOTA County, City of INVER GROVE HEIGHTS</u>									
FLINT HILLS RESOURCES, LP --- JUNCTION OF HWY 52 & 55									
MERCURY COMPOUNDS	8	0	0	0	12	0	0	0	20
<u>HENNEPIN County, City of MINNEAPOLIS</u>									
XCEL ENERGY - RIVERSIDE PLANT --- 3100 MARSHALL ST NE									
MERCURY COMPOUNDS	96	6	0	0	0	0	0	0	103
<u>ITASCA County, City of COHASSET</u>									
MINNESOTA POWER - BOSWELL ENERGY CENTER --- 1210 NW 3RD ST									
MERCURY COMPOUNDS	368	0	0	0	0	0	0	0	368
<u>ITASCA County, City of GRAND RAPIDS</u>									
BLANDIN PAPER --- 115 1ST ST SW									
MERCURY	0	3	0	0	0	0	0	0	3
<u>MOWER County, City of AUSTIN</u>									
AUSTIN UTILITIES - NE POWER STATION --- 3511 11TH ST NE									
MERCURY COMPOUNDS	9	0	0	0	0	0	0	0	9
<u>OLMSTED County, City of ROCHESTER</u>									
ROCHESTER PUBLIC UTILITIES - SILVER LAKE --- 425 W SILVER LAKE DRV NE									
MERCURY COMPOUNDS	10	4	0	0	0	0	0	0	14
<u>OTTER TAIL County, City of FERGUS FALLS</u>									
OTTER TAIL POWER CO. (HOOT LAKE) --- 1012 WATER PLANT ROAD									
MERCURY COMPOUNDS	36	0	0	0	0	0	0	0	36

**Attachment 5: Statewide Listing of Amount of Releases,
Transfers and Total Mercury and Mercury Compounds
Managed for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)**

Sorted by County, City, Facility	Released On-site (8.1a, 8.1b)	Released Off-site (8.1c, 8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>RAMSEY County, City of ROSEVILLE</u>									
MERCURY WASTE SOLUTIONS, INC. --- 2007 W. CO. RD. C-2									
MERCURY COMPOUNDS	0	4	0	0	0	130	0	0	134
<u>RAMSEY County, City of ST. PAUL</u>									
GERDAU AMERISTEEL - ST. PAUL --- 1678 RED ROCK RD									
MERCURY COMPOUNDS	162	0	0	0	0	50	0	0	212
<u>RAMSEY County, City of ST. PAUL</u>									
GERDAU AMERISTEEL RECYCLING - ST. PAUL --- 1678 RED ROCK RD									
MERCURY COMPOUNDS	11	334	0	0	0	19	0	0	364
<u>RAMSEY County, City of ST. PAUL</u>									
WALDORF CORP. (d/b/a ROCK-TENN COMPANY) --- 2250 WABASH AVE									
MERCURY	0	3	0	0	0	0	0	0	3
<u>RAMSEY County, City of ST. PAUL</u>									
XCEL ENERGY - HIGH BRIDGE PLANT --- 501 SHEPARD RD									
MERCURY COMPOUNDS	73	0	0	0	0	0	0	0	73
<u>RENVILLE County, City of RENVILLE</u>									
SOUTHERN MN BEET SUGAR COOP --- 83550 CO RD 21									
MERCURY	13	0	0	0	0	8	0	0	21
<u>SHERBURNE County, City of BECKER</u>									
XCEL ENERGY - BECKER RDF ASH LANDFILL --- 13700 SHERBURNE AVE. SOUTH									
MERCURY COMPOUNDS	682	0	0	0	0	0	0	0	682
<u>SHERBURNE County, City of BECKER</u>									
XCEL ENERGY - SHERCO PLANT --- 13999 INDUSTRIAL BLVD									
MERCURY COMPOUNDS	1,045	0	0	0	0	0	0	0	1,045
<u>ST LOUIS County, City of AURORA</u>									
MINNESOTA POWER - LASKIN ENERGY CENTER --- 5699 COLBY LAKE RD									
MERCURY COMPOUNDS	23	0	0	0	0	0	0	0	23
<u>ST LOUIS County, City of DULUTH</u>									
STORA ENSO DULUTH MILL --- 100 N CENTRAL AVE									
MERCURY COMPOUNDS	0	3	0	0	0	0	0	0	3
<u>ST LOUIS County, City of HIBBING</u>									
HIBBING PUC --- 1832 SIXTH AVENUE EAST									
MERCURY	7	11	0	0	0	0	0	0	18
<u>WASHINGTON County, City of BAYPORT</u>									
XCEL ENERGY - A.S. KING GENERATING PLANT --- 1103 KING PLANT RD									
MERCURY COMPOUNDS	76	40	0	0	0	0	0	0	116
<u>WASHINGTON County, City of ST. PAUL PARK</u>									
MARATHON ASHLAND PETROLEUM, LLC --- 300 3RD STREET									
MERCURY COMPOUNDS	3	44	0	0	0	2	0	0	49
<u>WINONA County, City of WINONA</u>									
MILLER WASTE MILLS, INC. - RTP --- 580 E FRONT ST									
MERCURY COMPOUNDS	0	1	0	0	0	0	0	0	1
Grand Totals:	2,813	456	0	0	13	210	0	0	3,036

**Attachment 6: Statewide Listing of Amount of Releases,
Transfers and Total Lead and Lead Compounds Managed
for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)**

Sorted by County, City, Facility	Released On-site (8.1a,8.1b)	Released Off-site (8.1c,8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>ANOKA County, City of ANOKA</u>									
ALTRON, INC. --- 6700 BUNKER LAKE BLVD. NW									
LEAD COMPOUNDS	0	0	0	0	0	1,003	0	0	1,003
<u>ANOKA County, City of ANOKA</u>									
BALLANTINE, INC. - DIVISION OF US TSUBAKI INC. --- 840 MCKINLEY STREET									
LEAD	0	0	0	0	0	145	0	0	145
<u>ANOKA County, City of ANOKA</u>									
FEDERAL CARTRIDGE COMPANY --- 900 EHLEN DRV									
LEAD COMPOUNDS	0	47,095	0	0	903,600	924,406	0	0	1,875,101
<u>ANOKA County, City of BLAINE</u>									
PARKER MOBIL CYLINDER DIV.-BLAINE --- 1460 93RD LANE NE									
LEAD	1	0	0	0	0	1,382	0	0	1,383
<u>ANOKA County, City of BLAINE</u>									
SAFETY-KLEEN SYSTEMS, INC. --- 9261 ISANTI ST NE									
LEAD	0	0	0	0	0	312	0	0	312
<u>ANOKA County, City of COON RAPIDS</u>									
HONEYWELL, INC. - CAP --- 8840 EVERGREEN BLVD									
LEAD COMPOUNDS	0	0	0	0	0	4,513	0	0	4,513
<u>ANOKA County, City of FRIDLEY</u>									
CUMMINS POWER GENERATION/ONAN CORP. --- 1400 73RD AVE NE									
LEAD	0	1	0	0	0	1,370	0	0	1,371
<u>ANOKA County, City of FRIDLEY</u>									
H.B. FULLER CO. --- 5220 MAIN ST NE									
LEAD	0	1	0	0	0	0	0	0	1
<u>ANOKA County, City of FRIDLEY</u>									
KURT MANUFACTURING DIE CAST --- 7585 HWY 65 NE									
LEAD	7	0	0	0	876	139	0	0	1,023
<u>ANOKA County, City of FRIDLEY</u>									
MICRO CONTROL CO. --- 7956 MAIN ST. NE									
LEAD COMPOUNDS	0	0	0	0	0	650	0	0	650
<u>BECKER County, City of DETROIT LAKES</u>									
S. J. ELECTRO SYSTEMS, INC. --- 22650 COUNTY HIGHWAY 6									
LEAD	1	0	0	0	0	0	0	0	1
<u>BELTRAMI County, City of SOLWAY</u>									
NORBORD MINNESOTA --- 4409 NORTHWOOD ROAD NW									
LEAD	5	788	0	0	0	0	0	0	792
<u>BENTON County, City of SARTELL</u>									
INTERNATIONAL PAPER CO. --- 100 E SARTELL ST									
LEAD COMPOUNDS	104	4	0	0	0	196	0	0	304
<u>BENTON County, City of SAUK RAPIDS</u>									
X-CEL OPTICAL CO. --- 806 S BENTON DRV									
LEAD COMPOUNDS	0	2	0	0	0	14,715	0	0	14,717

**Attachment 6: Statewide Listing of Amount of Releases,
Transfers and Total Lead and Lead Compounds Managed
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**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)**

Sorted by County, City, Facility	Released On-site (8.1a,8.1b)	Released Off-site (8.1c,8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>BLUE EARTH County, City of MANKATO</u> ADM CO. --- 2019 3RD AVE LEAD COMPOUNDS	3	9	0	0	0	0	0	0	11
<u>BLUE EARTH County, City of MANKATO</u> ATLAS ALCHEM PLASTICS, INC. --- 480 INDUSTRIAL ROAD LEAD COMPOUNDS	0	22	0	0	790	0	0	0	812
<u>BLUE EARTH County, City of MANKATO</u> THE DOTSON COMPANY, INC. --- 200 W ROCK ST LEAD	0	0	0	0	0	30	0	0	30
<u>BLUE EARTH County, City of MANKATO</u> WINLAND ELECTRONICS, INC. --- 1950 EXCEL DRIVE LEAD	0	2	0	0	0	1,195	0	0	1,197
<u>BROWN County, City of NEW ULM</u> 3M NEW ULM --- 1700 NORTH MINNESOTA STREET LEAD COMPOUNDS	0	310	0	0	720	6,900	0	0	7,930
<u>CARLTON County, City of CLOQUET</u> SAPPI CLOQUET LLC --- 2201 AVE B LEAD COMPOUNDS	3,719	109	0	0	0	0	0	0	3,828
<u>CARLTON County, City of CLOQUET</u> USG INTERIORS, INC. --- 35 ARCH ST LEAD	0	0	0	0	0	0	0	0	0
<u>CARVER County, City of CHANHASSEN</u> PARKER HANNIFAN CORP. --- 2860 WATER TOWER PLACE LEAD	0	0	0	0	0	1,266	0	0	1,266
<u>CARVER County, City of CHANHASSEN</u> ROBERTS AUTOMATIC PRODUCTS --- 880 LAKE DRV LEAD	0	0	0	0	0	8,096	0	0	8,096
<u>CARVER County, City of CHANHASSEN</u> ROSEMOUNT, INC. --- 8200 MARKET BLVD LEAD COMPOUNDS	9	17	0	0	0	591	0	0	618
<u>CARVER County, City of CHASKA</u> PRO-TECH INTERCONNECT SOLUTIONS LLC --- 4300 PEAVEY RD LEAD COMPOUNDS	0	8	0	0	0	863	0	0	871
<u>CHIPPEWA County, City of MONTEVIDEO</u> MICRO DYNAMICS CORP. --- 1646 N. 9TH ST. LEAD	0	0	0	0	0	1,320	0	0	1,320
<u>CLAY County, City of MOORHEAD</u> AMERICAN CRYSTAL SUGAR CO. - MOORHEAD --- 2500 N 11TH ST LEAD COMPOUNDS	380	0	0	0	0	0	0	0	380
<u>COOK County, City of SCHROEDER</u> TACONITE HARBOR ENERGY CENTER --- 8124 WEST HWY 61 LEAD COMPOUNDS	939	0	0	0	0	0	0	0	939

**Attachment 6: Statewide Listing of Amount of Releases,
Transfers and Total Lead and Lead Compounds Managed
for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)**

Sorted by County, City, Facility	Released On-site (8.1a,8.1b)	Released Off-site (8.1c,8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>CROW WING County, City of BRAINERD</u>									
ATEK WEST MFG. LLC --- 210 NE 10TH AVE									
LEAD	0	0	0	0	0	114	0	0	114
<u>CROW WING County, City of BRAINERD</u>									
KEYSTONE AUTOMOTIVE INDUSTRIES MN, INC. --- 2110 S 10TH ST									
LEAD COMPOUNDS	0	0	0	0	0	35	0	0	35
<u>CROW WING County, City of BRAINERD</u>									
WAUSAU PAPERS --- 1801 MILL AVE NE									
LEAD COMPOUNDS	404	0	0	0	0	0	0	0	404
<u>CROW WING County, City of DEERWOOD</u>									
PARKER-HANNIFIN CORP. --- 325 FRONT ST									
LEAD	0	1	0	0	0	12,938	0	0	12,939
<u>CROW WING County, City of DEERWOOD</u>									
TRUS JOIST - A WEYERHAEUSER BUSINESS --- 19586 CO RD 102									
LEAD COMPOUNDS	1	53	0	0	0	108	0	0	162
<u>DAKOTA County, City of APPLE VALLEY</u>									
HANSON PIPE & PRODUCTS, INC. --- 6055 150TH ST W									
LEAD	0	0	0	0	0	0	0	0	0
<u>DAKOTA County, City of BURNSVILLE</u>									
ROSEMOUNT AEROSPACE INC. --- 14300 JUDICIAL RD									
LEAD	1	0	0	0	0	559	0	0	560
<u>DAKOTA County, City of BURNSVILLE</u>									
XCEL ENERGY - BLACK DOG PLANT --- 1400 E BLACK DOG RD									
LEAD COMPOUNDS	584	406	0	0	0	0	0	0	990
<u>DAKOTA County, City of EAGAN</u>									
GOPHER RESOURCE CORP. --- 3385 S HWY 149									
LEAD COMPOUNDS	2,164	281,740	0	0	172,360,000	0	0	0	172,643,904
<u>DAKOTA County, City of EAGAN</u>									
MATERIALS PROCESSING CORP. --- 2805 W SERVICE RD									
LEAD	0	0	0	0	0	3,400	0	0	3,400
<u>DAKOTA County, City of EAGAN</u>									
SAFETY-KLEEN SYSTEMS, INC. --- 3227 TERMINAL DRV									
LEAD	0	0	0	0	0	274	0	0	274
<u>DAKOTA County, City of INVER GROVE HEIGHTS</u>									
FLINT HILLS RESOURCES, LP --- JUNCTION OF HWY 52 & 55									
LEAD COMPOUNDS	36	414	0	0	591	17	0	0	1,058
<u>DAKOTA County, City of ROSEMOUNT</u>									
SPECTRO ALLOYS CORP. --- 13220 DOYLE PATH									
LEAD	36	1,474	0	0	0	0	0	0	1,510
<u>FILLMORE County, City of RUSHFORD</u>									
TRW AUTOMOTIVE --- HWY 43 N. - PO BOX 708									
LEAD COMPOUNDS	2	1	0	0	0	612	0	0	614

**Attachment 6: Statewide Listing of Amount of Releases,
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**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)**

Sorted by County, City, Facility	Released On-site (8.1a,8.1b)	Released Off-site (8.1c,8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>FREEBORN County, City of ALBERT LEA</u>									
ALBERT LEA ELECTROPLATING, INC. --- 808 12TH ST BOX 89									
LEAD COMPOUNDS	0	7	0	0	0	0	0	0	7
<u>GOODHUE County, City of CANNON FALLS</u>									
AMESBURY GROUP, INC. --- 105 WASHINGTON ST									
LEAD COMPOUNDS	0	0	0	0	0	0	0	0	0
<u>HENNEPIN County, City of BLOOMINGTON</u>									
ADDED VALUE TECHNOLOGY LLC --- 9401 JAMES AVE S SUITE 100									
LEAD	0	2	0	0	0	0	0	0	2
<u>HENNEPIN County, City of BLOOMINGTON</u>									
GENERAL DYNAMICS ADVANCED INFO. SYSTEMS --- 3021 AMERICAN BLVD. E									
LEAD	0	22	0	0	0	462	0	0	484
<u>HENNEPIN County, City of BLOOMINGTON</u>									
PRINTED CIRCUITS, INC. --- 1200 W 96TH ST									
LEAD COMPOUNDS	0	4	0	0	0	49	0	0	53
<u>HENNEPIN County, City of BROOKLYN PARK</u>									
TECHNICAL PLATING, INC. --- 8760 XYLON AVE N									
LEAD	0	6	0	0	0	25	0	0	31
<u>HENNEPIN County, City of CRYSTAL</u>									
TRC CIRCUITS, INC. --- 3300 WINPARK DRV									
LEAD	0	1	0	0	0	286	0	0	287
<u>HENNEPIN County, City of EDEN PRAIRIE</u>									
EMERSON CONTROL TECHNIQUES --- 12005 TECHNOLOGY DRIVE									
LEAD	0	0	0	0	0	301	0	0	301
<u>HENNEPIN County, City of EDEN PRAIRIE</u>									
MICRO DYNAMICS CORP. --- 6201 BURY DRIVE									
LEAD	0	0	0	0	0	233	0	0	233
<u>HENNEPIN County, City of EDEN PRAIRIE</u>									
PHILLIPS & TEMRO INDUSTRIES, INC. --- 9700 W 74TH ST									
LEAD	0	0	0	0	0	2	0	0	2
<u>HENNEPIN County, City of GOLDEN VALLEY</u>									
HONEYWELL --- 1985 DOUGLAS DRV N									
LEAD	1	7	0	0	0	8,679	0	0	8,687
<u>HENNEPIN County, City of MAPLE GROVE</u>									
SILENT KNIGHT --- 7550 MERIDIAN CIRCLE									
LEAD COMPOUNDS	16	0	0	0	0	600	0	0	616
<u>HENNEPIN County, City of MAPLE GROVE</u>									
UNIVERSAL CIRCUITS, INC. --- 8860 ZACHARY LANE									
LEAD	0	5	0	0	0	1,965	0	0	1,970
<u>HENNEPIN County, City of MINNEAPOLIS</u>									
BOKER'S, INC. --- 3104 SNELLING AVE S									
LEAD	0	0	0	0	0	441	0	0	441

Attachment 6: Statewide Listing of Amount of Releases,
Transfers and Total Lead and Lead Compounds Managed
for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7 of EPA Form "R"

State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)

Sorted by County, City, Facility	Chemical	Released On-site (8.1a,8.1b)	Released Off-site (8.1c,8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>HENNEPIN County, City of MINNEAPOLIS</u>										
	G.A.F. BUILDING MATERIALS CORP. --- 50 LOWRY AVE N									
	LEAD COMPOUNDS	0	59	0	0	0	0	0	0	59
<u>HENNEPIN County, City of MINNEAPOLIS</u>										
	GAYTEE STAINED GLASS INC. --- 2744 LYNDAL AVE. SOUTH									
	LEAD	0	0	0	0	0	130	0	0	130
<u>HENNEPIN County, City of MINNEAPOLIS</u>										
	GRACO, INC. --- 60 11TH AVE NE BOX 1441									
	LEAD	0	2	0	0	0	900	0	0	902
<u>HENNEPIN County, City of MINNEAPOLIS</u>										
	HARD CHROME, INC. --- 2631 2ND ST NE									
	LEAD COMPOUNDS	0	14	0	0	0	46	0	0	60
<u>HENNEPIN County, City of MINNEAPOLIS</u>										
	HONEYWELL, INC. - DSES --- 2600 RIDGWAY PKWY									
	LEAD COMPOUNDS	0	0	0	0	0	1,038	0	0	1,038
<u>HENNEPIN County, City of MINNEAPOLIS</u>										
	PROSPECT FOUNDRY, INC. --- 1225 WINTER ST NE									
	LEAD	13	65	0	0	0	12	0	0	90
<u>HENNEPIN County, City of MINNEAPOLIS</u>										
	SUPERIOR PLATING, INC. --- 315 1ST AVE NE									
	LEAD COMPOUNDS	0	149	0	0	0	173	0	0	322
<u>HENNEPIN County, City of MINNEAPOLIS</u>										
	XCEL ENERGY - RIVERSIDE PLANT --- 3100 MARSHALL ST NE									
	LEAD COMPOUNDS	534	2,749	0	0	0	0	0	0	3,283
<u>HENNEPIN County, City of MINNEAPOLIS</u>										
	ZALK STEEL & SUPPLY CO. --- 466 ST. ANTHONY PKWY									
	LEAD	13	0	0	0	0	0	0	0	13
<u>HENNEPIN County, City of MINNETONKA</u>										
	HOLADAY CIRCUITS, INC. --- 11126 BREN RD W									
	LEAD	9	26	0	0	0	4,776	0	0	4,810
<u>HENNEPIN County, City of NEW HOPE</u>										
	ALPHA CERAMICS, INC. --- 5121 WINNETKA AVE									
	LEAD COMPOUNDS	20	0	0	0	0	14,199	0	0	14,219
<u>HENNEPIN County, City of NEW HOPE</u>										
	CLARIANT --- 9101 INTERNATIONAL PKWY									
	LEAD COMPOUNDS	0	98	0	0	0	0	0	0	98
<u>HENNEPIN County, City of NEW HOPE</u>										
	INTERMET --- 5100 BOONE AVE N									
	LEAD	9	0	0	0	0	477	0	0	486
<u>HENNEPIN County, City of PLYMOUTH</u>										
	BANNER ENGINEERING CORP. --- 15755 32ND AVE. N.									
	LEAD COMPOUNDS	0	40	0	0	0	156	0	0	195

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**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)**

Sorted by County, City, Facility	Released On-site (8.1a,8.1b)	Released Off-site (8.1c,8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>HENNEPIN County, City of PLYMOUTH</u>									
CIRCUIT SCIENCE, INC. --- 15831 HWY 55									
LEAD	0	0	0	0	0	1,691	0	0	1,691
<u>HENNEPIN County, City of ROGERS</u>									
GRACO-KOCH CENTER --- 20500 DAVID KOCH AVE									
LEAD	0	4	0	0	0	2,500	0	0	2,504
<u>HENNEPIN County, City of ST. LOUIS PARK</u>									
DOUGLAS CORP. - PLATING DIVISION --- 3520 XENWOOD AVE S									
LEAD COMPOUNDS	0	11	0	0	0	0	0	0	11
<u>HENNEPIN County, City of ST. LOUIS PARK</u>									
NORTHLAND ALUMINUM PRODUCTS, INC. --- 5005 COUNTY ROAD 25									
LEAD COMPOUNDS	2,260	3,300	0	0	0	1,011	0	0	6,571
<u>HENNEPIN County, City of ST. PAUL</u>									
NORTHWEST AIRLINES, INC. --- 5101 NORTHWEST DRIVE									
LEAD	0	535	0	0	0	1,345	0	0	1,880
<u>HUBBARD County, City of BEMIDJI</u>									
AINSWORTH ENGINEERED (USA) LLC --- 29647 U.S. HWY. 2									
LEAD	7	0	0	0	0	0	0	0	7
<u>ITASCA County, City of COHASSET</u>									
MINNESOTA POWER - BOSWELL ENERGY CENTER --- 1210 NW 3RD ST									
LEAD COMPOUNDS	12,843	11	0	0	0	0	0	0	12,854
<u>ITASCA County, City of GRAND RAPIDS</u>									
AINSWORTH ENGINEERED (USA) LLC --- 502 CO RD 63									
LEAD	755	0	0	0	0	0	0	0	755
<u>ITASCA County, City of GRAND RAPIDS</u>									
BLANDIN PAPER --- 115 1ST ST SW									
LEAD	1	538	0	0	0	0	0	0	539
<u>LAKE County, City of TWO HARBORS</u>									
LOUISIANA PACIFIC CORP. --- INDUSTRIAL PARK N HWY 2									
LEAD COMPOUNDS	11	0	0	0	0	0	0	0	11
<u>LYON County, City of COTTONWOOD</u>									
MID CONTINENT CABINETRY, LLC --- 67 E 2ND ST N									
LEAD	0	0	0	0	0	122	0	0	122
<u>LYON County, City of MARSHALL</u>									
ARCHER DANIELS MIDLAND --- 400 W ERIE ROAD									
LEAD COMPOUNDS	10	0	0	0	0	0	0	0	10
<u>LYON County, City of MARSHALL</u>									
KOCH MATERIALS CO. --- 901 N 7TH ST									
LEAD	0	0	0	0	0	0	0	0	0
<u>MARTIN County, City of FAIRMONT</u>									
AVERY WEIGH-TRONIX LLC --- 1000 ARMSTRONG DRIVE									
LEAD	1	0	0	0	0	1,131	0	0	1,132

**Attachment 6: Statewide Listing of Amount of Releases,
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Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
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(Amount in Pounds)**

Sorted by County, City, Facility	Released On-site (8.1a,8.1b)	Released Off-site (8.1c,8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>MCLEOD County, City of HUTCHINSON</u>									
3M HUTCHINSON --- 915 ADAMS ST SE LEAD COMPOUNDS	0	4	0	0	0	3	0	0	7
<u>MCLEOD County, City of HUTCHINSON</u>									
HUTCHINSON MFG. INC. --- 720 HWY. 7 WEST LEAD	3	0	0	0	0	3,397	0	0	3,399
<u>MCLEOD County, City of HUTCHINSON</u>									
HUTCHINSON TECHNOLOGY, INC. --- 40 W HIGHLAND PARK DR LEAD	0	52	0	0	0	5	0	0	57
<u>MOWER County, City of AUSTIN</u>									
AUSTIN UTILITIES - NE POWER STATION --- 3511 11TH ST NE LEAD COMPOUNDS	110	0	0	0	0	0	0	0	110
<u>NICOLLET County, City of NORTH MANKATO</u>									
CARLSON CRAFT SOCIAL (TAYLOR CORP.) --- 1750 TOWER BLVD LEAD	30	0	0	0	0	1,275	0	0	1,305
<u>NICOLLET County, City of NORTH MANKATO</u>									
KATO ENGINEERING - PLANT 3 --- 2075 HOWARD DRV LEAD COMPOUNDS	1	0	0	0	0	456	0	0	457
<u>NICOLLET County, City of ST. PETER</u>									
TAYTRONICS --- 430 RITT ST. LEAD	1	0	0	0	0	1,856	0	0	1,857
<u>OLMSTED County, City of ROCHESTER</u>									
PEMSTAR, INC. --- 3535 TECHNOLOGY DR NW LEAD	5	16	0	0	0	1,563	0	0	1,584
<u>OLMSTED County, City of ROCHESTER</u>									
ROCHESTER PUBLIC UTILITIES - SILVER LAKE --- 425 W SILVER LAKE DRV NE LEAD COMPOUNDS	515	1,030	0	0	0	0	0	0	1,545
<u>OTTER TAIL County, City of FERGUS FALLS</u>									
BANNER ENGINEERING CORP. --- 1010 WEYRENS RD. LEAD COMPOUNDS	0	0	0	0	0	162	0	0	162
<u>OTTER TAIL County, City of FERGUS FALLS</u>									
OTTER TAIL POWER CO. (HOOT LAKE) --- 1012 WATER PLANT ROAD LEAD COMPOUNDS	563	1	0	0	0	0	0	0	564
<u>OTTER TAIL County, City of FERGUS FALLS</u>									
QUALITY CIRCUITS INC. --- 1102 PROGRESS DRIVE LEAD	0	1	0	0	0	1,674	0	0	1,675
<u>POLK County, City of CROOKSTON</u>									
AMERICAN CRYSTAL SUGAR CO. - CROOKSTON --- HWY 75 S BOX 600 LEAD COMPOUNDS	369	0	0	0	0	0	0	0	369
<u>POLK County, City of EAST GRAND FORKS</u>									
AMERICAN CRYSTAL SUGAR CO. - EAST GRAND FORKS --- BUSINESS HWY 2 E LEAD COMPOUNDS	740	0	0	0	0	0	0	0	740

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**State of Minnesota
Department of Public Safety
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(Amount in Pounds)**

Sorted by County, City, Facility	Released On-site (8.1a,8.1b)	Released Off-site (8.1c,8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Managed
<u>RAMSEY County, City of ARDEN HILLS</u>									
CARDIAC PACEMAKERS INC., DBA GUIDANT --- 4100 HAMLIN AVE N									
LEAD COMPOUNDS	0	0	0	0	0	169	0	0	169
<u>RAMSEY County, City of ARDEN HILLS</u>									
CELESTICA, INC. --- 4300 W. ROUND LAKE RD.									
LEAD COMPOUNDS	1	68	0	0	0	20,094	0	0	20,163
<u>RAMSEY County, City of MAPLEWOOD</u>									
MODINE NORTH CENTRAL, INC. --- 2055 WHITE BEAR AVE									
LEAD	1	0	0	0	0	799	0	0	800
<u>RAMSEY County, City of ROSEVILLE</u>									
LUBRICATION TECHNOLOGIES, INC --- 2420 W CO RD C									
LEAD COMPOUNDS	0	0	0	0	0	0	0	0	0
<u>RAMSEY County, City of ROSEVILLE</u>									
UNICIRCUIT ROSEVILLE, INC. --- 2520 TERMINAL RD									
LEAD COMPOUNDS	0	16	0	0	0	1,807	0	0	1,823
<u>RAMSEY County, City of ROSEVILLE</u>									
US FILTER RECOVERY SERVICES INC. --- 2430 ROSE PLACE									
LEAD COMPOUNDS	0	1,230	0	0	0	3,337	0	0	4,567
<u>RAMSEY County, City of ST. PAUL</u>									
CENTURY CIRCUITS & ELECTRONICS, INC. --- 155 EATON ST									
LEAD	5	0	0	0	0	10,610	0	0	10,615
<u>RAMSEY County, City of ST. PAUL</u>									
FORD - TWIN CITIES ASSEMBLY PLANT --- 966 S MISSISSIPPI RIVER BLVD									
LEAD	0	0	0	0	0	0	0	0	0
<u>RAMSEY County, City of ST. PAUL</u>									
GE INTERLOGIX --- 2266 2ND ST. N.									
LEAD	1	0	0	0	0	4,000	0	0	4,001
<u>RAMSEY County, City of ST. PAUL</u>									
GERDAU AMERISTEEL - ST. PAUL --- 1678 RED ROCK RD									
LEAD COMPOUNDS	332	3	0	0	2,514	223,469	0	0	226,318
<u>RAMSEY County, City of ST. PAUL</u>									
GERDAU AMERISTEEL RECYCLING - ST. PAUL --- 1678 RED ROCK RD									
LEAD COMPOUNDS	4	141,658	0	0	86,000	0	0	0	227,662
<u>RAMSEY County, City of ST. PAUL</u>									
KOCH MATERIALS CO. --- 2209 CHILDS RD									
LEAD	0	0	0	0	0	0	0	0	0
<u>RAMSEY County, City of ST. PAUL</u>									
MIXON, INC. --- 2286 CAPP RD									
LEAD COMPOUNDS	102	1	0	0	0	514,282	0	0	514,385
<u>RAMSEY County, City of ST. PAUL</u>									
UNIVAR USA INC. --- 845 TERRACE CT									
LEAD	0	1	0	0	0	22	0	0	23

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<u>RAMSEY County, City of ST. PAUL</u>									
VERSA IRON & MACHINE --- 867 FOREST ST LEAD	413	26	0	0	0	0	0	0	438
<u>RAMSEY County, City of ST. PAUL</u>									
WALDORF CORP. (d/b/a ROCK-TENN COMPANY) --- 2250 WABASH AVE LEAD	0	359	0	0	0	0	0	0	359
<u>RAMSEY County, City of ST. PAUL</u>									
XCEL ENERGY - HIGH BRIDGE PLANT --- 501 SHEPARD RD LEAD COMPOUNDS	474	65	0	0	0	0	0	0	539
<u>RAMSEY County, City of WHITE BEAR LAKE</u>									
TRANE --- 4833 WHITE BEAR PKWY. LEAD COMPOUNDS	0	0	0	0	0	3,215	0	0	3,215
<u>RAMSEY County, City of WHITE BEAR LAKE</u>									
WATER GREMLIN CO. --- 1610 WHITAKER AVE LEAD COMPOUNDS	1	0	0	0	0	1,951,312	0	0	1,951,313
<u>RENVILLE County, City of RENVILLE</u>									
SOUTHERN MN BEET SUGAR COOP --- 83550 CO RD 21 LEAD	70	0	0	0	0	964	0	0	1,034
<u>RICE County, City of NORTHFIELD</u>									
MULTEK FLEXIBLE CIRCUITS, INC. - EAST FACILITY --- 805 HWY 3 N LEAD COMPOUNDS	1	689	0	0	0	863	0	0	1,553
<u>SCOTT County, City of NEW PRAGUE</u>									
CHART, INC. - NEW PRAGUE FACILITY --- 407 7TH ST NW LEAD	2	0	0	0	0	0	0	0	2
<u>SCOTT County, City of SAVAGE</u>									
KOCH MATERIALS COMPANY --- 12101 YOSEMITE AVE S LEAD	0	0	0	0	0	0	0	0	0
<u>SHERBURNE County, City of BECKER</u>									
XCEL ENERGY - BECKER RDF ASH LANDFILL --- 13700 SHERBURNE AVE. SOUTH LEAD COMPOUNDS	126,328	0	0	0	0	0	0	0	126,328
<u>SHERBURNE County, City of BECKER</u>									
XCEL ENERGY - SHERCO PLANT --- 13999 INDUSTRIAL BLVD LEAD COMPOUNDS	61,176	10	0	0	0	0	0	0	61,186
<u>ST LOUIS County, City of AURORA</u>									
MINNESOTA POWER - LASKIN ENERGY CENTER --- 5699 COLBY LAKE RD LEAD COMPOUNDS	544	0	0	0	0	0	0	0	544
<u>ST LOUIS County, City of COOK</u>									
AINSWORTH ENGINEERED USA LLC --- 9358 HWY 53 S LEAD	416	0	0	0	0	0	0	0	416
<u>ST LOUIS County, City of DULUTH</u>									
GEORGIA-PACIFIC CORP. --- 1220 RAILROAD STREET LEAD	48	43	0	0	0	0	0	0	91

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<u>ST LOUIS County, City of DULUTH</u>									
GERDAU AMERISTEEL DULUTH --- 800 GARFIELD AVE LEAD COMPOUNDS	0	1	0	0	1,934	0	0	0	1,935
<u>ST LOUIS County, City of DULUTH</u>									
ME GLOBAL INC. --- 200 E CARTERETT ST LEAD COMPOUNDS	0	316	0	0	0	0	0	0	316
<u>ST LOUIS County, City of DULUTH</u>									
STORA ENSO DULUTH MILL --- 100 N CENTRAL AVE LEAD COMPOUNDS	0	1,977	0	0	0	0	0	0	1,977
<u>ST LOUIS County, City of HIBBING</u>									
HIBBING PUC --- 1832 SIXTH AVENUE EAST LEAD	74	589	0	0	0	0	0	0	663
<u>ST LOUIS County, City of HIBBING</u>									
L & M RADIATOR, INC. --- 1414 E 37TH ST LEAD	2	16	0	0	0	0	0	0	18
<u>ST LOUIS County, City of HIBBING</u>									
NOBLE INDUSTRIES, LTD. --- 3430 E 13TH AVE LEAD	0	3	0	0	0	1,708	0	0	1,712
<u>ST LOUIS County, City of HIBBING</u>									
NORTHERN CASTINGS CORP. --- 555 W 25TH ST LEAD	7	576	0	0	0	14	0	0	598
<u>ST LOUIS County, City of HIBBING</u>									
REPTRON MANUFACTURING SERVICES --- 3125 14TH AVE E LEAD	0	14	0	0	0	3,709	0	0	3,723
<u>STEARNS County, City of ST. CLOUD</u>									
GREDE - ST. CLOUD --- 5200 FOUNDRY CIRCLE LEAD	1	87	0	0	0	417	0	0	505
<u>STEELE County, City of OWATONNA</u>									
BLOUNT, INC. --- 3249 CO RD 45 SOUTH LEAD	0	0	0	0	0	467	0	0	467
<u>STEELE County, City of OWATONNA</u>									
SPX SERVICE SOLUTIONS --- 655 EISENHOWER DRV LEAD	0	0	0	0	0	6,541	0	0	6,541
<u>STEELE County, City of OWATONNA</u>									
TRUTH HARDWARE --- 700 W BRIDGE ST LEAD	0	1	0	0	0	22	0	0	23
<u>STEELE County, City of OWATONNA</u>									
WENGER CORP. --- 555 PARK DRV LEAD	0	0	0	0	0	19	0	0	19
<u>SWIFT County, City of BENSON</u>									
CNH AMERICA LLC - BENSON PLANT --- 260 HIGHWAY 12 S.E. LEAD	0	4	0	0	0	1,872	0	0	1,876

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**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)**

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<u>WABASHA County, City of LAKE CITY</u>									
FEDERAL-MOGUL POWERTRAIN SYSTEMS --- 520 N 8TH ST									
LEAD COMPOUNDS	123	218	0	0	0	0	0	0	340
<u>WASECA County, City of WASECA</u>									
EMERSON NETWORK POWER CONNECTIVITY SOLUTIONS --- 299 JOHNSON AVE SW									
LEAD	0	0	0	0	0	301	0	0	301
<u>WASHINGTON County, City of BAYPORT</u>									
XCEL ENERGY - A.S. KING GENERATING PLANT --- 1103 KING PLANT RD									
LEAD COMPOUNDS	283	6,608	0	0	0	0	0	0	6,891
<u>WASHINGTON County, City of COTTAGE GROVE</u>									
3M COTTAGE GROVE CENTER --- 10746 INNOVATION RD									
LEAD COMPOUNDS	358	28,615	0	0	0	3,945	0	0	32,918
<u>WASHINGTON County, City of HUGO</u>									
AD GRAPHICS --- 2300 MAIN ST.									
LEAD COMPOUNDS	0	0	0	0	0	608	0	0	609
<u>WASHINGTON County, City of ST. PAUL PARK</u>									
MARATHON ASHLAND PETROLEUM, LLC --- 300 3RD STREET									
LEAD COMPOUNDS	32	2,634	0	0	97	149	0	0	2,912
<u>WATONWAN County, City of ST. JAMES</u>									
WESTIN AUTOMOTIVE PRODUCTS, INC. --- 240 S 15TH ST									
LEAD COMPOUNDS	8	0	0	0	0	30	0	0	38
<u>WINONA County, City of LEWISTON</u>									
RIVERSIDE ELECTRONICS LTD. --- 1 RIVERSIDE DRV									
LEAD	0	0	0	0	0	3,562	0	0	3,562
<u>WINONA County, City of WINONA</u>									
BADGER FOUNDRY CO. --- 1058 E MARK ST									
LEAD	52	10	0	0	4	0	0	0	66
<u>WINONA County, City of WINONA</u>									
BENCHMARK ELECTRONICS WINONA DIV. --- 4065 THEURER BLVD									
LEAD	0	10	0	0	0	7,286	0	0	7,296
<u>WINONA County, City of WINONA</u>									
HAUSER ART GLASS CO., INC. --- 1685 WILKIE DRIVE									
LEAD	0	0	0	0	0	3,023	0	0	3,023
<u>WINONA County, City of WINONA</u>									
MILLER WASTE MILLS, INC. - RTP --- 580 E FRONT ST									
LEAD COMPOUNDS	0	1	0	0	0	0	0	0	1
<u>WINONA County, City of WINONA</u>									
TRW AUTOMOTIVE --- 5752 INDUSTRIAL PARK RD									
LEAD COMPOUNDS	8	63	0	0	0	21,353	0	0	21,424
<u>WINONA County, City of WINONA</u>									
TRW AUTOMOTIVE - MACHINE BLDG. DIV. --- 5731 INDUSTRIAL PARK RD									
LEAD	0	0	0	0	0	61	0	0	61
<u>WINONA County, City of WINONA</u>									
WATLOW WINONA, INC. --- 1241 BUNDY BLVD									
LEAD COMPOUNDS	3	11	0	0	0	3,770	0	0	3,783
Grand Totals:	218,107	527,135	0	0	173,357,127	3,834,088	0	0	177,409,321

**Attachment 7: Number of Facilities (by County) Reporting
Releases and Transfers for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, of EPA Form "R"**

**State of Minnesota
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(Amount in Pounds)**

County	Number of Facilities	Environmental Releases (8.1)	Off-site Releases and Transfers (8.1,3,5,7)	Total Chemicals Managed (8.1,2,3,4,5,6,7)
Anoka	24	195,901	5,626,129	6,990,333
Becker	3	307	23,056	23,363
Beltrami	1	160,850	788	160,850
Benton	3	71,165	26,148	365,396
Blue Earth	6	767,700	118,823	955,224
Brown	2	15,588	809,040	835,898
Carlton	3	740,750	6,613,485	13,602,282
Carver	13	268,435	228,619	1,130,686
Cass	1	7,689	0	7,689
Chippewa	1	0	1,320	1,320
Chisago	2	8,101	0	8,305
Clay	2	240,400	0	290,442
Cook	1	313,102	0	313,102
Cottonwood	1	9,752	0	61,752
Crow Wing	7	59,936	328,214	383,233
Dakota	23	1,768,386	982,562	211,746,403
Dodge	2	87,236	406,100	1,491,342
Douglas	4	72,059	93,372	244,979
Faribault	2	11,455	0	11,455
Fillmore	3	102,390	30,904	879,295
Freeborn	4	65,511	70,147	193,287
Goodhue	11	399,719	433,712	2,082,664
Hennepin	82	1,178,881	7,366,960	10,042,994
Hubbard	3	744,864	23,351	768,215
Isanti	2	186	53,526	53,551
Itasca	3	2,224,313	22,154	2,432,579
Jackson	1	10,650	135,000	145,650
Kanabec	1	20,051	100	20,151
Koochiching	3	597,381	13,600	8,876,581
Lac Qui Parle	2	449,943	2,640	699,952
Lake	2	36,126	28,476	88,295
Lake of the Woods	1	2,053	5,940	46,992
Le Sueur	4	26,172	99,490	1,191,014
Lyon	5	196,919	4,534	201,454
Marshall	1	41,153	0	41,153
Martin	5	467,296	7,921	475,217
McLeod	4	462,697	2,238,186	18,474,939
Meeker	4	16,826	502,968	975,130
Morrison	2	418,119	0	1,248,362
Mower	3	205,435	37,933	242,182
Nicollet	5	15,906	13,806	29,712
Nobles	1	9,656	40,928	50,584
Olmsted	10	520,023	971,366	1,777,552
Otter Tail	5	302,764	159,309	587,987
Pipestone	1	158,823	0	158,823
Polk	4	593,375	38,131	738,014
Ramsey	46	4,274,908	12,061,443	15,238,800
Redwood	1	253,250	21,380	297,932
Renville	1	248,782	1,076	259,704
Rice	5	177,287	1,465,178	2,728,205
Rock	1	2,307	0	25,888
Roseau	1	43,000	17,346	60,346
Scott	9	62,424	687,201	1,069,564
Sherburne	3	8,096,425	96,968	8,900,783
Sibley	2	124	0	64,955
St Louis	18	520,200	243,038	816,990
Stearns	9	805,709	966,187	2,324,757

**Attachment 7: Number of Facilities (by County) Reporting
Releases and Transfers for Calendar Year 2003
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, of EPA Form "R"**

**State of Minnesota
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(Amount in Pounds)**

County	Number of Facilities	Environmental Releases (8.1)	Off-site Releases and Transfers (8.1,3,5,7)	Total Chemicals Managed (8.1,2,3,4,5,6,7)
Steele	12	412,134	983,053	1,420,740
Stevens	1	24,440	0	643,860
Swift	2	1,105	151,825	152,911
Todd	2	267,584	8,860	282,128
Wabasha	4	58,814	8,850	66,588
Wadena	1	16,620	0	16,620
Waseca	2	9,652	144,201	174,497
Washington	11	2,373,002	5,403,468	27,850,101
Watsonwan	1	19	18,396	18,404
Winona	12	92,096	1,224,260	1,481,862
Wright	2	8,135	7,436	15,571
Totals:	419	31,814,059	51,068,904	355,057,588

**Attachment 8: Sample Statewide Listing of Amount of Releases, Transfers,
and Total Chemicals Managed for Calendar Year 2003**
Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, of EPA Form "R"
Sorted by County, City, Facility

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)**

	Released On-site (8.1a, 8.1b)	Released Off-site (8.1c, 8.1d)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Chemicals Managed
<u>ANOKA County, City of ANOKA -- ALTRON, INC. -- 6700 BUNKER LAKE BLVD. NW</u>									
LEAD COMPOUNDS	0	0	0	0	0	1,003	0	0	1,003
Totals	0	0	0	0	0	1,003	0	0	1,003
<u>ANOKA County, City of ANOKA -- BALLANTINE, INC. - DIVISION OF US TSUBAKI INC. -- 840 MCKINLEY STREET</u>									
CHROMIUM	2	0	0	0	0	3,380	0	0	3,382
ZINC COMPOUNDS	2	0	0	0	0	4,506	0	0	4,508
LEAD	0	0	0	0	0	145	0	0	145
Totals	4	0	0	0	0	8,031	0	0	8,031
<u>ANOKA County, City of ANOKA -- FEDERAL CARTRIDGE COMPANY -- 900 EHLEN DRV</u>									
ETHYLENE GLYCOL	48	0	0	0	0	0	0	478,822	478,870
BARIUM COMPOUNDS	0	4,842	0	0	0	0	0	0	4,842
COPPER COMPOUNDS	0	12,579	0	0	0	3,679,084	0	0	3,691,663
LEAD COMPOUNDS	0	47,095	0	0	903,600	924,406	0	0	1,875,101
NITRATE COMPOUNDS (WATER	0	0	0	0	0	0	0	40,781	40,781
NITROGLYCERIN	0	0	0	0	0	0	4,524	1,344	5,868
ANTIMONY COMPOUNDS	0	940	0	0	0	0	0	0	940
Totals	48	65,456	0	0	903,600	4,603,490	4,524	520,947	6,098,017
<u>ANOKA County, City of ANOKA -- HOFFMAN ENCLOSURES INC. - MAIN PLANT -- 2100 HOFFMAN WAY</u>									
TOLUENE	7,511	0	0	3,977	0	0	0	0	11,488
Totals	7,511	0	0	3,977	0	0	0	0	3,977
<u>ANOKA County, City of ANOKA -- MATE PRECISION TOOLING CO. -- 1295 LUND BLVD.</u>									
CHROMIUM	0	0	0	0	0	20,238	0	0	20,238
Totals	0	0	0	0	0	20,238	0	0	20,238
<u>ANOKA County, City of ANOKA -- MENTOR CORPORATION -- 800 LUND BLVD</u>									
TOLUENE	10,756	0	0	0	0	0	0	0	10,756
Totals	10,756	0	0	0	0	0	0	0	0
<u>ANOKA County, City of BLAINE -- ARROW CRYOGENICS -- 1671 93RD LANE NE</u>									
DICHLOROMETHANE	14,380	0	0	0	14,380	0	0	0	28,760
Totals	14,380	0	0	0	14,380	0	0	0	14,380
<u>ANOKA County, City of BLAINE -- PARKER MOBIL CYLINDER DIV.-BLAINE -- 1460 93RD LANE NE</u>									
LEAD	1	0	0	0	0	1,382	0	0	1,383
MANGANESE	13	0	0	0	0	26,126	0	0	26,139
NICKEL	5	0	0	0	0	22,632	0	0	22,637
CHROMIUM	4	0	0	0	0	19,425	0	0	19,429
COPPER	1	0	0	0	0	3,233	0	0	3,234
Totals	24	0	0	0	0	72,798	0	0	72,798

Attachment 9: Facilities Filing a Certification Statement (Alternate Threshold Option) instead of an EPA Form R

Starting with the 1995 reporting year, EPA granted a reporting modification entitled *TRI Alternate Thresholds for Facilities with Low Annual Reportable Amounts*. A facility that does not exceed 500 pounds of on-site and off-site releases and transfers (total of Sections 8.1 through 8.7 of the EPA Form R) is eligible to apply the alternate manufacture, process, or otherwise use threshold of one million pounds to determine if a Form R is required to be submitted for a listed chemical. If a facility does not meet the 500 pound threshold, and uses less than one million pounds of the listed chemical, the facility may file a two page Certification Statement instead of the Form R for that chemical.

The owner or operator must retain records substantiating the alternate threshold determination for a period of three years from the date of the submission of the certification statement. The certification statement must be submitted on an annual basis for each eligible chemical.

The Minnesota EPCRA Program follows EPA's guidelines for facilities filing a Certification Statement and is granting those facilities an exemption from preparing Pollution Prevention Plans, submitting annual Pollution Prevention Progress Reports, and paying state related fees.

In 2003, 121 facilities filed 256 Certification Statements including 60 who filed both a Form R and Certification Statement(s), and 61 who filed only a Certification Statement(s).

The following facilities filed a Certification Statement(s) for the 2003 reporting year:

<u>FACILITY NAME</u>	<u>ERC ID NUMBER</u>	<u>CHEMICAL NAME</u>
Federal-Cartridge Co.	02-005-0004	Nitric Acid, Dibutyl Phthalate
Hoffman Enclosures, Inc.	02-005-0053	Diisocyanates, Manganese
Hoffman Enclosures, Inc.	02-005-0060	Nickel, Manganese, Chromium
Onan Mfg.	02-055-0009	Ethylene Glycol
H.B. Fuller Co.	02-055-0018	Zinc Compounds
Land O'Lakes - Detroit Lakes	03-055-0001	Zinc Compounds, Manganese Compounds
Land O'Lakes Wood Preserving	04-215-0001	Copper Compounds, Arsenic Compounds, Chromium Compounds
Gold'n Plump Farms	05-073-0015	Copper Compounds, Zinc Compounds, Manganese Compounds
CHS Oilseed Processing	07-100-0005	Chlorine
Hubbard Feeds, Inc.	07-100-0006	Zinc Compounds, Manganese Compounds, Copper Compounds, Selenium Compounds, Cobalt Compounds
Dotson Co., Inc.	07-100-0082	Diisocyanates
Big Gain Inc.	07-160-0004	Zinc Compounds, Manganese Compounds, Copper Compounds
New Ulm Public Utilities	08-080-0033	N-Hexane, 1,2,4 -Trimethylbenzene
McLaughlin Gormley King	10-035-0008	Permethrin, Piperonyl Butoxide, Maleic Anhydride, Dipropyl Isocinchomerate, Phenothrin, Tetramethrin, Dicyclopentadiene
Quali-Tech, Inc.	10-035-0031	Zinc Compounds, Manganese Compounds, Copper Compounds
Mammoth, Inc.	10-035-0041	Chlorodifluoromethane
Manus Products	10-100-0019	Ethylbenzene

<u>FACILITY NAME</u>	<u>ERC ID NUMBER</u>	<u>CHEMICAL NAME</u>
Ethanol 2000	17-020-0002	Benzene, Cyclohexane, N-Hexane, Ethylbenzene 1,2,4 -Trimethylbenzene, Toluene, Xylene
Image	18-015-0081	Diisocyanates
Chart Industries, Inc.	19-006-0077	Nickel, Manganese, Chromium
Water Heater Innovations, Inc.	19-025-0027	Diisocyanates
W.R. Grace & Co.	19-025-0095	Nitrate Compounds
Ergotron Inc.	19-025-0125	Diisocyanates
Imperial Plastics, Inc.	19-040-0024	Di(2-ethylhexyl)Phthalate
Land O'Lakes Farmland Feed	19-071-0001	Copper Compounds, Manganese Compounds, Zinc Compounds
ChemCentral/Minnesota	19-080-0001	Ethylene Glycol, Ethylbenzene, Di(2-ethylhexyl)Phthalate, Methyl Isobutyl Ketone, 1,2,4-Trimethylbenzene, N-Hexane, Glycol Ethers, Methanol
Spectro Alloys Corp.	19-145-0009	Nickel
Dole Explosives, Inc.	19-145-0014	Ammonia, Nitrate Compounds
DPC Industries, Inc.	19-145-0018	Hydrogen Fluoride
Al-Corn Clean Fuel	20-014-0016	Benzene, Toluene, Xylene
Hubbard Feeds, Inc.	21-005-0002	Zinc Compounds, Manganese Compounds, Copper Compounds
Standard Iron & Wire Works, Inc.	21-005-0064	Nickel, Manganese, Chromium
Crown Tonka Walk-Ins	22-110-0014	Trichlorofluoromethane, Dichlorofluoromethane, Diisocyanates
Pro-Corn	23-134-0019	Benzene, Cyclohexane, Xylene, Toluene, Ethylbenzene, Zinc Compounds
Airgas North Central, Inc.	24-005-0040	Propylene
Agra Resources Coop	24-005-0081	Benzene, Cyclohexane, N-Hexane, Xylene, Toluene Zinc Compounds, Ethylbenzene
Amesbury Group, Inc.	25-025-0029	Chromium Compounds
FMS Corporation	27-005-0092	Ammonia, Tetrachloroethylene
Caterpillar Paving Products, Inc.	27-015-0053	Ethylene Glycol
Bodycote Thermal Processing	27-056-0070	Ammonia
Douglas Corp.	27-056-0076	Diisocyanates
Honeywell, Inc.	27-070-0001	Diisocyanates
Lubrication Technologies, Inc.	27-070-0041	Ethylene Glycol
Electrochemicals, Inc.	27-120-0010	Nitric Acid, Formaldehyde
Innovex, Inc.	27-120-0014	Hydrochloric Acid (aerosol only)
Hawkins, Inc.	27-135-0030	Formic Acid

<u>FACILITY NAME</u>	<u>ERC ID NUMBER</u>	<u>CHEMICAL NAME</u>
Purina Mills LLC	27-135-0062	Copper Compounds, Manganese Compounds, Zinc Compounds
Diamond Vogel – North Inc.	27-135-0079	Toluene Diisocyanate (mixed isomers)
Aggregate Industries	27-135-0130	Nitrate Compounds
Kohl & Madden Printing Ink Corp.	27-135-0222	Barium Compounds
Ceram-Traz Corporation	27-175-0002	Diethanolamine
Foam Enterprises, Inc.	27-180-0069	1,1-Dichloro-1-fluoroethane, Chlorodifluoromethane
Hutchinson Technology, Inc.	27-180-0078	Ammonia
Wagner Spray Tech. Corp.	27-180-0110	Diisocyanates
Northland Aluminum Products	27-215-0009	Phenol
Lamb-Weston/RDO Frozen	29-120-0003	Chlorine
Trouw Nutrition USA	34-175-0007	Zinc Compounds, Copper Compounds, Manganese Compounds
Willmar Poultry Farms	34-175-0079	Formaldehyde
Land O'Lakes - Willmar	34-175-0080	Copper Compounds, Manganese Compounds, Zinc Compounds
Ag Processing, Inc.	37-045-0012	Chlorine
ADM	42-095-0048	Benzene, Chlorine
ADM Alliance Nutrition	43-030-0017	Zinc Compounds, Manganese Compounds
3M Hutchinson	43-055-0003	Barium Compounds, Antimony Compounds, Zinc Compounds
Hutchinson Mfg., Inc.	43-055-0029	Chromium, Manganese, Nickel
Weigh-Tronix, Inc.	46-035-0041	Chromium, Nickel
Innovex, Inc.	47-100-0002	Chlorine, Hydrochloric Acid (aerosol),
Anderson Chemical Co.	47-100-0005	Glycol Ethers
Larson-Glastron Boats, Inc.	49-120-0003	Diisocyanates, Dimethyl Phthalate
Crestliner, Inc.	49-120-0025	Diisocyanates
Central MN Ethanol Coop	49-120-0048	Benzene, N-Hexane, Toluene
Hormel Foods Corp.	50-015-0002	Nitric Acid, Sodium Nitrite
Alumacraft Boat Co.	52-080-0001	Diisocyanates
Hubbard Feeds, Inc.	53-150-0007	Zinc Compounds, Copper Compounds, Manganese Compounds
IBM – Rochester	55-095-0007	Diisocyanates
Kerry Bio-Science	55-095-0017	Nitric Acid, Ammonia, Peracetic Acid, Propylene
Lund Boat Company	56-251-0003	Diisocyanates
Arctic Cat, Inc.	57-115-0042	Diisocyanates, Ethylene Glycol
C&H Chemical	62-070-0010	Sodium Nitrite, Glycol Ethers

<u>FACILITY NAME</u>	<u>ERC ID NUMBER</u>	<u>CHEMICAL NAME</u>
Gopher State Ethanol	62-070-0029	Cyclohexane, N-Hexane, Ammonia
3M St. Paul - Main	62-070-0045	Toluene Diisocyanate (mixed isomers)
Harcros Chemicals, Inc.	62-070-0070	Ethylene Glycol
TI-Kromatic Industrial	62-070-0071	N-Butyl Alcohol, Ethylbenzene
Ashland Distribution Co.	62-070-0077	Trichloroethylene, N-Butyl Alcohol, Ethylene Glycol
Univar USA, Inc.	62-070-0079	Toluene, Xylene, Nitric Acid, Ammonia
Brenntag Great Lakes	62-070-0082	Ethylene Glycol, 1,2,4-Trimethylbenzene, Methyl Isobutyl Ketone, Ethylbenzene, N-Butyl Alcohol, Naphthalene, Tetrachloroethylene, Trichloroethylene, Xylene, Glycol Ethers, Dichloromethane, Diethanolamine
Gross-Given Mfg. Co.	62-070-0108	Diisocyanates
Versa Iron & Machine	62-070-0230	Copper
Schwing America, Inc.	62-092-0001	Propylene
Treating Services Minnesota	62-095-0001	Copper Compounds, Arsenic Compounds, Chromium Compounds
Aspen Research Corp.	62-095-0043	Chromium Compounds, Antimony Compounds
Central Bi-Products	64-110-0002	Chlorine, Chlorine Dioxide
Schult Homes	64-110-0038	Diisocyanates
Minnesota Energy	65-040-0008	Benzene, Ammonia, Propylene, Chlorine
Northern Tool & Equip. Inc.	66-030-0086	Diisocyanates
Malt-O-Meal Co.	66-060-0041	Zinc Compounds
Agri-Energy	67-055-0022	Ammonia, Benzene, Cyclohexane, N-Hexane
Staver Foundry, Inc.	69-440-0020	Chromium, Nickel
Chaska Chemical Co., Inc.	70-082-0002	Nitric Acid, Glycol Ethers
Conklin Company, Inc.	70-085-0006	Ammonia, Zinc Compounds
Aggregate Industries	70-085-0042	Nitrate Compounds
Gold'N Plump Poultry, Inc.	73-040-0001	Chlorine
Wiman Corp.	73-073-0031	Di(2-ethylhexyl)Phthalate
Melrose Dairy Proteins LLC	73-150-0003	Methyl Tert-Butyl Ether, Toluene, Xylene
Grede - St. Cloud	73-230-0084	Diisocyanates
New Flyer USA	73-230-0097	Ethylene Glycol, Chromium, Nickel, Manganese
Standard Iron & Wire Works, Inc.	73-265-0028	Manganese
Tandem Products, Inc.	74-014-0039	Diisocyanates
Truth Hardware	74-070-0002	Chromium, Nickel
Diversified Energy Co.	75-070-0014	Acrolein, Benzene, N-Hexane, Toluene
CNH America LLC - Benson	76-015-0028	Ethylene Glycol
Chippewa Valley Ethanol Co.	76-015-0036	Ammonia, Benzene, Methanol, Toluene
Central Bi-Products	77-124-0002	Chlorine, Chlorine Dioxide

<u>FACILITY NAME</u>	<u>ERC ID NUMBER</u>	<u>CHEMICAL NAME</u>
Federal-Mogul Powertrain Sys.	79-067-0003	Nickel
Andersen Window Corp. - Main	82-015-0002	Diisocyanates
Nor-Lakes Services Midwest	82-070-0009	Zinc Compounds
Armour Swift-Eckrich Inc.	83-090-0004	Ammonia
Badger Foundry Co.	85-145-0005	Diisocyanates
United Machine and Foundry	85-145-0066	Chromium, Nickel
Miller Felpax Corp.	85-145-0069	Diisocyanates, Proprietary Glycol
Land O'Lakes Farmland Feed	86-085-0010	Copper Compounds
Standard Iron & Wire Works, Inc.	86-109-0028	Manganese

Attachment 10: Facilities which submitted an EPA Form R in 2002 but are not subject to reporting in 2003

<u>Facility Name & Location</u>	<u>County</u>	<u>ERC ID Number</u>
IMI Cornelius, Inc., Anoka	Anoka	02-005-0003
Mentor Corp., Anoka	Anoka	02-005-0055
Plasti Dip International, Circle Pines	Anoka	02-020-0005
Plexus Corp., Blaine	Anoka	02-020-0076
H.B. Fuller Co., Fridley	Anoka	02-055-0018
Kurt Mfg. Co., Fridley	Anoka	02-055-0071
Life Fitness, Ramsey	Anoka	02-095-0023
Coleman Powermate, Inc., Springfield	Brown	08-105-0012
Parker Hannifin Corp., Chanhassen	Carver	10-030-0024
Chart Industries, Inc., Burnsville	Dakota	19-006-0077
Finishing Equipment, Inc., Eagan	Dakota	19-025-0111
Progress Casting Group, Albert Lea	Freeborn	24-005-0044
Farmland Foods, Albert Lea	Freeborn	24-005-0050
Onyx Special Services, Inc., Bloomington	Hennepin	27-005-0134
General Mills, Inc., Eden Prairie	Hennepin	27-056-0054
Honeywell Advanced Circuits, Inc., Hopkins	Hennepin	27-095-0001
Pechiney Plastic Pkg., Minneapolis	Hennepin	27-135-0003
Valmont Applied Coating Tech., Minneapolis	Hennepin	27-135-0104
General Mills Purity Oats, Minneapolis	Hennepin	27-135-0249
Oldcastle Glass, Inc., Minneapolis	Hennepin	27-135-0620
Honeywell Advanced Circuits, Inc., Minnetonka	Hennepin	27-140-0008
Precision Diversified Industries, Plymouth	Hennepin	27-180-0029
Honeywell Advanced Circuits, Inc., St. Louis Park	Hennepin	27-215-0003
American Marine, Mora	Kanabec	33-065-0005
ADC Telecommunications, Le Sueur	Le Sueur	40-070-0039
Haugen Furniture Co., Hutchinson	McLeod	43-055-0037
Onan Power Electronics, St. Peter	Nicollet	52-080-0003
Marigold Foods, Rochester	Olmsted	55-095-0010
Kaneb Pipeline, Roseville	Ramsey	62-060-0002
Brenntag Great Lakes, Roseville	Ramsey	62-060-0003
Gopher State Ethanol, St. Paul	Ramsey	62-070-0029
SCI Enclosures, St. Paul	Ramsey	62-070-0105
Advance Corp., St. Paul	Ramsey	62-070-0356
Aspen Research Corp., White Bear Lake	Ramsey	62-095-0043
Protient, Inc., Faribault	Rice	66-030-0003
Lakeside Foods, Brooten	Stearns	73-035-0008
Vision Ease Lens, Inc., St. Cloud	Stearns	73-230-0020
Mustang Mfg. Co., Owatonna	Steele	74-070-0057
Dura Supreme, Howard Lake	Wright	86-085-0007

Attachment 11: “Core” Set of Reported Chemicals (1988-2003)

The Environmental Protection Agency (EPA) has the authority to add chemicals to the Section 313 Toxic Chemical List (see Appendix A on page 82) if they meet the statutory toxicity criteria. Conversely, EPA may delete chemicals if these chemicals do not meet the toxicity criteria. Since 1987, EPA has deleted a number of chemicals from the list, added others, and modified the reporting requirements for others. Year-to-year chemical release/transfer comparisons must be based on the same set of chemicals to ensure that changes are not simply the result of the addition, deletion, or change in definition of reportable chemicals from one year to another. Consequently, in order to make a meaningful comparison, we have identified a “core” set of chemicals for which there was a requirement to report every year from 1988 through the most current reporting year (2003). Pages 52 to 56 include a listing of these core chemicals, and the quantity of them that was released/transferred in 1988 versus the quantity that was released/transferred in 2003. This information is intended to provide at least a gross indication of the upward/downward release/transfer trend for each of the core chemicals during the 1988-2003 time period.

To facilitate a full understanding of the release/transfer data provided, two basic clarifications are needed. First, if 1988 or 2003 data are not included for a particular chemical, it is because that chemical was not reported by any facility in that year. Second, the total number of facilities indicated at the end of the listing represents the total *that reported core chemicals*, not the total number of facilities reporting in that particular year.

By way of summary, from 1988-2003, 588 facilities that met the reporting criteria for one or more years notified the Minnesota EPCRA Program that they were no longer required to file Form R. Several factors are responsible for this development, including pollution prevention initiatives, chemical substitution or elimination, regulatory changes, and facilities moving to another state or going out of business. For these reasons, it appears that there have been reductions in chemical releases into the environment, especially into the air. However, **the following factors should be considered before drawing any conclusion relative to the upward/downward release/transfer trends:**

1. Manufacture and process thresholds began at 75,000 pounds for the 1987 reporting year, dropped to 50,000 pounds for 1988, and dropped to 25,000 pounds for 1989 and thereafter. Therefore, some facilities may have been required to report in 1989, but not 1988.
2. Effective with the 1995 reporting year, facilities whose “total annual reportable amount” does not exceed 500 pounds, and that do not manufacture, process, or otherwise use more than one million pounds of a TRI chemical, were permitted to submit a certification statement (EPA Form A) instead of the EPA Form R. Form A’s do not include any release or transfer amount information.
3. Prior to the 1991 reporting year, facilities were required to report only transfers to Publicly Owned Treatment Works (POTW) and other off-site locations for the purposes of treatment and disposal. The federal Pollution Prevention Act of 1990 added to the TRI the collection of data for energy recovery and recycling. Because this data was not collected until 1991, comparisons can only be drawn between 1988-2003 using data reported for off-site transfers for treatment and disposal.
4. Beginning with the 1997 reporting year, metals and metal compounds reported as being transferred off-site to a POTW or for solidification/stabilization or wastewater treatment, must be reported as a transfer for disposal. Prior to 1997, facilities were allowed to report these amounts as a transfer for treatment off-site.
5. Dramatic increases and/or decreases in releases/transfers as indicated in Figures 6-11 on pages 57-58 can

often be attributed to a single facility. For example:

a. Fugitive Air

IBM in Rochester reported releases of 770,000 pounds of Freon 113 as fugitive air emissions in 1988 but are no longer required to report this chemical. Freon 113 is being phased out because of its potential to deplete the earth's ozone layer. Numerous other large and small facilities contributed to the remaining reductions in fugitive air emissions.

b. Stack Air

The 3M facility in Hutchinson reduced their total stack air emissions from 15,926,247 pounds in 1988 to 309,244 pounds in 2001. Numerous other large and small facilities contributed to the remaining reductions in stack air emissions.

c. Water

Northwest Airlines at the Twin Cities International Airport reported a discharge of 1,995,424 pounds of Ethylene Glycol to water in 1993, but through chemical substitution was able to replace Ethylene Glycol with a non-reportable chemical.

d. Land

The Xcel Energy (formerly NSP) facility in Becker reported 7,468,285 pounds of primarily metal compounds to on-site Land in 1998. The 1998 reporting year was the first year that electric utilities were required to report under the federal TRI expansion.

e. Publicly Owned Treatment Works (POTW)

Sappi (formerly Potlatch) at their Cloquet facility reported 2,200,000 pounds of Methanol being transferred to the POTW in 1988, 4,482,658 pounds in 1998, and 6,526,966 pounds in 2003.

f. Off-site Transfers (Treatment and Disposal only)

- The 3M facility in Hutchinson reported total off-site transfers of Methyl Ethyl Ketone and Toluene for treatment of 3,003,000 pounds in 1989, 577,571 pounds in 1990 and 331,000 pounds in 1998.
- The 3M facility in Cottage Grove reported total off-site transfers for treatment of Methyl Ethyl Ketone, Toluene, Xylene, and Ethylene Glycol of 4,630,000 pounds in 1989 but only 10,000 pounds of these same four chemicals in 1990.
- As indicated under the POTW heading above, Sappi (formerly Potlatch) at their Cloquet facility reported 2,200,000 pounds of Methanol being transferred off-site to the POTW for treatment in 1988 and 6,526,966 pounds in 2003.
- Numerous facilities, as part of an EPA enforcement initiative, reported for the first time in the year 2000 the off-site transfers of Nitrate Compounds for treatment for reporting years 1995-1999.

"Core" Set of Reported Chemicals (1988 - 2003)

State of Minnesota
 Department of Public Safety
 Minnesota EPCRA Program
 (Amount in Pounds)

Chemical	Year	# of Facilities	Fugitive Air	Stack Air	Water	Land	POTW	Offsite (Disposal and Treatment)
1,1,1-Trichloroethane	1988	74	1,078,094	2,079,144	0	0	3,397	293,477
1,1,2,2-Tetrachloroethane	1988	1	250	50,000	0	0	0	0
1,1,2-Trichloroethane	1988	1	120	16,000	0	0	0	3,400
1,2,4-Trimethylbenzene	1988	8	17,840	201,061	30	210	8	31,030
	2003	9	37,366	65,691	15	0	0	906
1,2-Butylene oxide	1988	1	1,300	0	0	0	0	0
1,2-Dibromoethane	1988	1	0	5	0	0	0	0
	2003	1	0	18	0	0	0	1
1,2-Dichloroethane	1988	2	83	12,009	0	0	0	9,400
	2003	1	7	24	0	0	0	0
1,3-Butadiene	1988	1	0	13,000	30	0	0	30
	2003	1	1,068	933	2	0	0	0
1,4-Dioxane	1988	3	1,879	23,584	0	0	45,985	421
	2003	1	255	2,100	0	0	53,000	0
2,4-D	1988	1	0	0	0	0	0	245
2,4-Dimethylphenol	1988	1	0	0	0	1	0	0
2-Ethoxyethanol	1988	4	20,702	485,577	120	0	12,250	39,000
	2003	2	550	10,899	0	0	14	31
2-Methoxyethanol	1988	1	0	9,800	0	0	0	0
4,4'-Isopropylidenediphenol	2003	2	0	1,660	0	0	0	2,800
4,4'-Methylenedianiline	1988	2	0	0	0	0	0	8,145
	2003	1	0	0	0	0	0	0
Acetaldehyde	2003	11	1,505	364,454	620	5	8,703	0
Acetonitrile	2003	1	0	1	0	0	0	0
Acrolein	2003	4	0	78,746	0	0	0	0
Acrylic acid	1988	1	4	120	0	0	0	0
	2003	2	215	14,072	225	0	0	33,170
Acrylonitrile	1988	1	0	0	0	0	0	0
Aluminum (fume or dust)	1988	4	0	27,688	4,100	0	63	109,842
	2003	5	3,035	742	0	0	0	129,550
Anthracene	2003	1	17	4	0	0	0	5
Antimony	1988	2	130	140	0	19,098	68	0
	2003	1	14	13	0	0	313	28,000
Antimony compounds	1988	3	5	63	6	18	28	6,405
	2003	9	10	179	2,527	42,110	23	15,469
Arsenic	1988	2	65	74	160	5,981	6	0
	2003	1	7	7	0	0	47	16,900

Note: See important explanatory information on pages 50-51.

"Core" Set of Reported Chemicals (1988 - 2003)

State of Minnesota
 Department of Public Safety
 Minnesota EPCRA Program
 (Amount in Pounds)

Chemical	Year	# of Facilities	Fugitive Air	Stack Air	Water	Land	POTW	Offsite (Disposal and Treatment)
Arsenic compounds	1988	2	0	250	0	0	0	1,350
	2003	2	10	260	130	24,510	0	15
Barium	1988	4	0	21,870	1,000	84,900	0	267
	2003	3	78	109,526	0	0	10,546	34,047
Barium compounds	1988	3	250	250	0	0	250	2,135
	2003	20	654	63,326	3,310	7,655,727	10,784	1,071,721
Benzene	1988	4	14,180	300,310	30	970	0	715
	2003	7	20,924	9,317	2,830	14	0	116
Benzoyl chloride	1988	1	250	250	0	0	0	0
Beryllium	1988	1	0	1	0	0	0	0
Biphenyl	1988	2	1,080	0	3	0	0	91
	2003	1	84	9	0	0	0	0
Bromomethane	2003	1	11,315	0	0	0	0	0
Butyl acrylate	2003	1	28	2,194	0	0	0	0
C.I. Basic Green 4	1988	1	0	0	0	0	0	0
Cadmium	1988	4	0	5	63	14	8	254
Cadmium compounds	1988	1	0	0	0	0	0	1,050
Carbon disulfide	1988	2	0	7,600	0	0	0	0
	2003	2	1	21	0	0	0	0
Carbon tetrachloride	1988	1	0	0	0	0	0	0
Carbonyl sulfide	2003	3	2	12,750	0	0	0	18
Catechol	1988	1	0	0	0	0	14,000	0
	2003	2	0	0	0	5	1,075	0
Chlorine	1988	40	14,906	469,794	26,804	0	42,724	62,000
	2003	7	1,582	984	0	0	21	0
Chlorine dioxide	1988	3	500	19,250	0	0	0	0
	2003	2	10	25,503	0	0	5	0
Chloroform	1988	2	102,000	161,000	79,000	430	17,000	0
Chloromethane	1988	1	143,000	0	0	0	0	0
	2003	1	0	0	0	0	0	0
Chromium	1988	11	757	1,558	1,313	12,250	1,258	25,734
	2003	31	219	945	0	17	121	2,461
Chromium compounds	1988	11	1,300	1,496	0	12,056	46,593	36,042
	2003	21	438	2,652	111	112,649	33,871	279,181
Cobalt	1988	2	250	65	200	290	0	2
	2003	2	0	5	0	0	0	0
Cobalt compounds	1988	2	3	649	0	0	0	9,686
	2003	5	34	1,166	0	24,810	0	844

Note: See important explanatory information on pages 50-51.

"Core" Set of Reported Chemicals (1988 - 2003)

State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)

Chemical	Year	# of Facilities	Fugitive Air	Stack Air	Water	Land	POTW	Offsite (Disposal and Treatment)
Copper	1988	27	2,540	3,013	57	0	3,672	30,474
	2003	48	9,262	9,239	1	9	799	18,480
Copper compounds	1988	15	511	1,009	5	1,283	9,695	190,419
	2003	23	113	7,243	906	324,783	1,267	1,807,534
Cresol (mixed isomers)	1988	1	0	0	0	24	0	0
	2003	2	16	1,080	0	5	1,762	5
Cumene	1988	1	91	0	30	0	0	30
	2003	2	1,249	222	2	0	0	33
Cyanide compounds	1988	8	1,250	750	0	0	27,882	7,700
	2003	5	500	1,341	0	0	225	15,651
Cyclohexane	1988	3	5,004	67,240	150	0	0	30
	2003	7	6,276	26,747	7	0	0	3,488
Decabromodiphenyl oxide	2003	4	0	0	0	0	0	6,421
Di(2-ethylhexyl) phthalate	1988	3	0	4,100	0	3	1	4,860
	2003	3	255	0	0	255	1	4,663
Dibenzofuran	2003	1	0	46	0	0	0	0
Dichloromethane	1988	40	594,104	2,176,785	1,800	0	1,839	188,395
	2003	8	11,414	58,385	0	0	545	0
Diethanolamine	1988	3	0	250	0	0	13,362	250
Dimethyl phthalate	1988	1	25,500	0	0	0	0	0
	2003	1	0	199	0	0	0	0
Ethyl acrylate	1988	1	2,400	960	0	0	0	0
	2003	1	772	151	0	0	0	0
Ethylbenzene	1988	11	20,790	443,063	30	1,800	500	28,143
	2003	14	29,425	84,439	14	0	0	291
Ethylene	1988	2	23,700	310	30	0	0	30
	2003	2	5,100	1,542	4	0	0	0
Ethylene glycol	1988	20	33,394	64,116	1,493	0	303,604	392,057
	2003	21	14,937	906	4,702	0	539,589	5,225
Ethylene oxide	2003	2	100	100	0	0	0	0
Formaldehyde	1988	18	4,700	749,359	3,900	0	8,197	8,385
	2003	15	30,387	322,307	0	5	19,164	1,455
Freon 113	1988	50	2,446,227	953,886	0	0	4,295	55,796
Glycol ethers	1988	31	322,763	837,357	0	0	306,809	59,832
	2003	20	102,748	412,850	0	0	56,812	340
Hexachlorobenzene	2003	1	0	0	0	0	0	0
Hydrogen cyanide	1988	1	0	95	800	0	0	0
Hydrogen fluoride	1988	3	1,550	96,500	0	0	0	0
	2003	13	261	258,097	0	0	83	503

Note: See important explanatory information on pages 50-51.

"Core" Set of Reported Chemicals (1988 - 2003)

State of Minnesota
 Department of Public Safety
 Minnesota EPCRA Program
 (Amount in Pounds)

Chemical	Year	# of Facilities	Fugitive Air	Stack Air	Water	Land	POTW	Offsite (Disposal and Treatment)
Lead	1988	6	6,760	7,530	1,510	142,955	493	69,388
	2003	90	237	1,761	0	1	495	5,200
Lead compounds	1988	8	12,250	5,043	0	370,747	1,505	18,291
	2003	73	1,234	9,447	988	204,605	423	521,456
Maleic anhydride	1988	5	317	663	0	0	0	42
	2003	2	13	1,031	0	0	0	200
Manganese	1988	9	510	1,330	360	0	250	16,694
	2003	24	862	2,518	0	5	303	41,380
Manganese compounds	1988	10	13,000	2,910	5	130,000	4,810	1,050
	2003	16	2,806	11,780	25,840	1,538,501	138,295	206,635
Mercury	1988	1	2	130	0	18	0	0
	2003	6	36	23	0	14	15	3
Mercury compounds	2003	21	4	1,824	0	912	1	438
Methanol	1988	32	128,628	2,199,194	0	280,000	2,245,700	289,959
	2003	34	101,574	1,608,548	662	0	6,620,639	81,848
Methyl acrylate	1988	1	70	1,300	0	0	0	0
Methyl ethyl ketone	1988	44	450,882	12,859,366	240	730	1,250	668,447
	2003	29	50,820	351,342	8	5	11,971	1,474,422
Methyl isobutyl ketone	1988	23	31,057	572,202	0	0	500	57,660
	2003	10	16,669	88,532	0	0	0	683
Methyl methacrylate	1988	1	1,500	660	73	0	0	0
	2003	5	35,948	6,412	0	0	0	0
Molybdenum trioxide	1988	2	250	0	0	0	0	0
	2003	7	195	305	19	27,510	0	3,326
n-Butyl alcohol	1988	20	48,999	807,983	0	0	100	85,270
	2003	8	84,864	400,486	0	0	0	0
Naphthalene	1988	3	13,704	2,094	3	1,500	0	51
	2003	4	10,031	453	0	29	0	160
Nickel	1988	13	788	760	1,260	2,500	919	45,295
	2003	33	111	312	0	19	569	992
Nickel compounds	1988	4	1,355	750	0	86,040	831	1,019
	2003	21	,723	19,272	80	114,968	1,379	191,911
Nitric acid	1988	52	3,156	44,371	250	0	140,957	60,501
	2003	43	2,595	25,014	0	0	81,758	67,909
Nitroglycerin	1988	1	0	0	0	250	0	0
	2003	1	0	0	0	0	0	1,344
O-Toluidine	1988	1	0	0	0	0	0	0
Pentachlorophenol	1988	1	250	250	0	0	0	0
	2003	1	7	2	0	0	0	566

Note: See important explanatory information on pages 50-51.

"Core" Set of Reported Chemicals (1988 - 2003)

State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in Pounds)

Chemical	Year	# of Facilities	Fugitive Air	Stack Air	Water	Land	POTW	Offsite (Disposal and Treatment)
Peracetic acid	1988	1	15	8	0	0	0	0
	2003	1	35	633	0	0	0	0
Phenol	1988	10	2,780	231,949	1,200	289,310	500	21,218
	2003	9	3,581	58,178	120	0	2,077	,871
Phosphorus (yellow or white)	2003	1	0	0	0	0	0	69
Phthalic anhydride	1988	2	0	10,750	0	0	0	0
	2003	2	21	1,025	0	0	0	,600
Polychlorinated biphenyls	2003	2	0	0	0	0	0	1,767
Propylene	1988	3	153,000	67,250	30	0	0	30
	2003	3	35,365	6,716	4	0	0	0
Propylene oxide	1988	1	,750	750	0	0	0	0
	2003	1	6	440	0	0	0	0
sec-Butyl alcohol	1988	1	0	0	0	0	0	0
Selenium compounds	1988	1	0	25	660	180	0	0
	2003	1	2	27	2,600	0	0	37
Silver	1988	1	0	0	70	0	0	0
Silver compounds	1988	1	0	0	0	0	0	,210
Styrene	1988	26	787,847	117,193	30	0	0	6,015
	2003	31	458,529	658,344	0	0	0	7,071
tert-Butyl alcohol	1988	1	0	17,799	0	0	0	0
	2003	3	2	2,156	0	0	0	0
Tetrachloroethylene	1988	8	51,086	107,564	0	0	603	14,000
	2003	4	12,974	85,838	0	0	0	,515
Toluene	1988	72	750,321	10,673,905	30	750	846	1,693,032
	2003	39	164,176	612,865	8	0	5	387,239
Toluene-2,4-diisocyanate	1988	7	,870	575	0	0	0	2,250
Toluene-2,6-diisocyanate	1988	4	,348	39	0	0	0	,170
Trichloroethylene	1988	27	466,036	396,587	0	0	1,500	53,123
	2003	13	35,479	191,579	0	0	39	2,989
Vanadium (fume or dust)	1988	1	0	150	0	630	0	0
Vinyl acetate	2003	1	7	70	0	0	0	0
Xylene (mixed isomers)	1988	62	561,448	4,602,829	30	2,000	800	291,947
	2003	40	166,423	611,023	37	9	2	2,123
Zinc compounds	1988	19	84,755	22,575	14,410	1,501,773	7,423	118,118
	2003	37	5,538	13,659	5,280	490,117	2,487	1,078,453
1988 Totals		365	8,456,206	42,057,890	141,315	2,948,711	3,272,481	5,120,902
2003 Totals		371	1,483,110	6,724,708	51,052	10,561,600	7,599,228	7,559,532

Note: See important explanatory information on pages 50-51.

Figure 6: "Core" Set of Chemicals - Fugitive Air

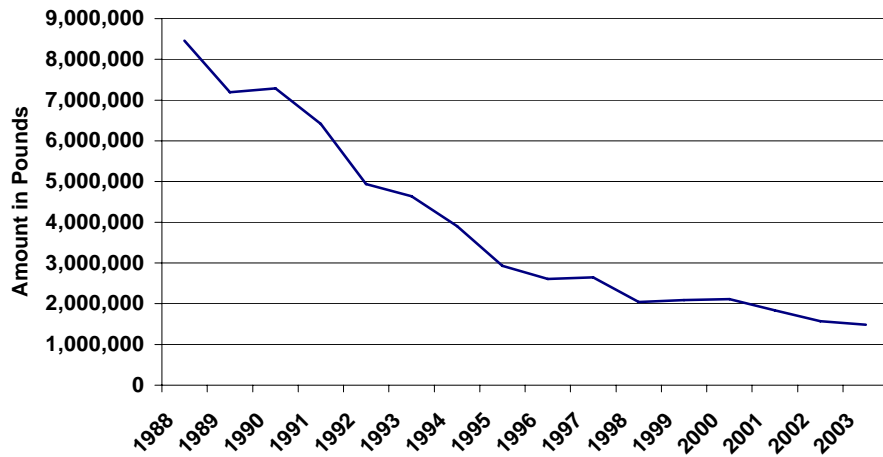


Figure 7: "Core" Set of Chemicals - Stack Air

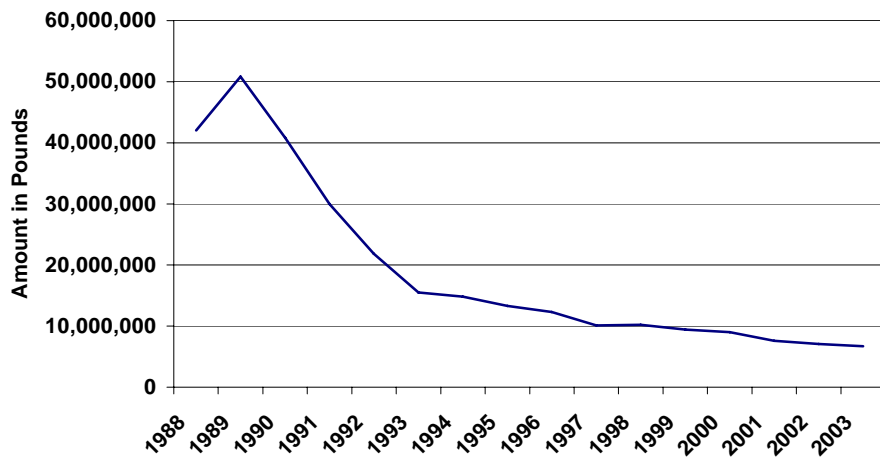
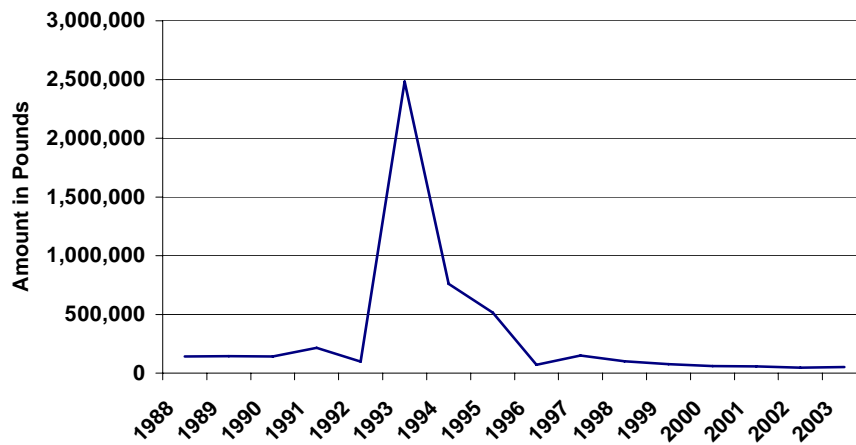


Figure 8: "Core" Set of Chemicals - Water



Note: See important explanatory information on pages 50-51.

Figure 9: "Core" Set of Chemicals - Land

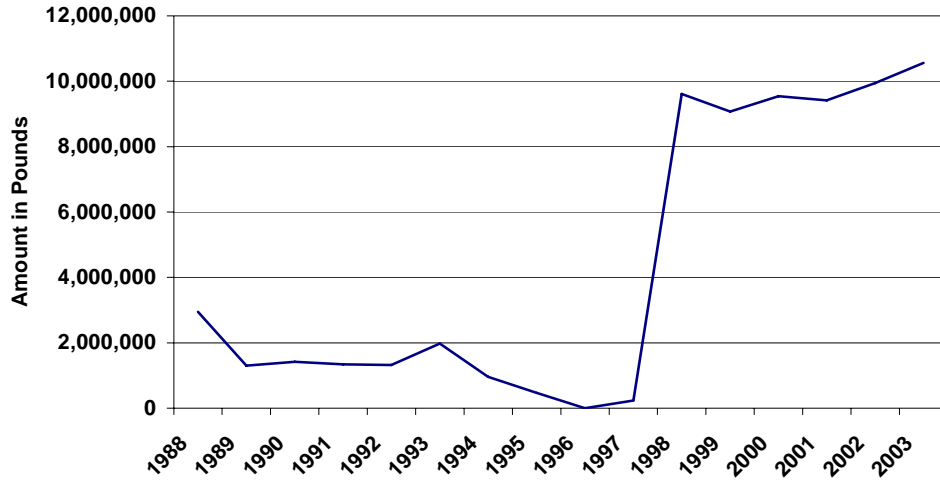


Figure 10: "Core" Set of Chemicals - POTW

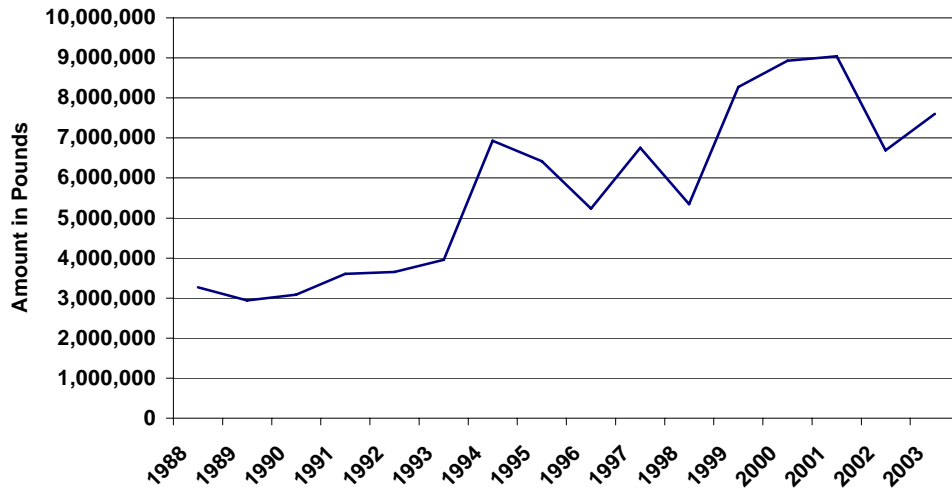
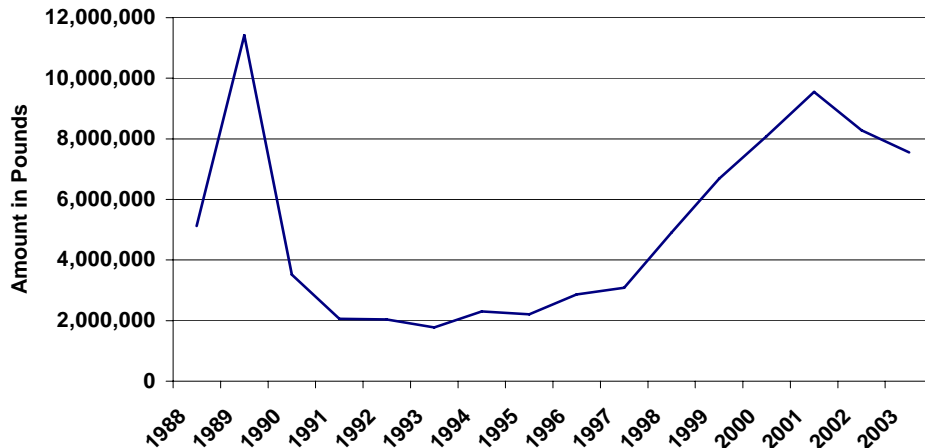


Figure 11: "Core" Set of Chemicals - Offsite Transfers (Disposal and Treatment Only)



Note: See important explanatory information on pages 50-51.

V. Pollution Prevention Progress Reports

The Minnesota Toxic Pollution Prevention Act (TPPA) of 1990 requires facilities that report toxic chemical releases and/or transfers under Section 313 of SARA Title III to prepare a Pollution Prevention Plan and submit annual Progress Reports. This section is a summary of the Progress Report information for each reporting facility.

Definition of Pollution Prevention

Pollution Prevention means eliminating or reducing at the source the use, generation, or release of toxic pollutants, hazardous substances, and hazardous wastes. Pollution Prevention in Minnesota includes the following activities:

Input change:

Replacing a toxic material with a non-toxic or less toxic material.

Product reformulation:

Changing the design or composition of an existing end product to reduce the need for toxic materials.

Production process redesign:

Developing or using production units of a different design or upgrading/renovating equipment to reduce the need for toxic materials.

Operational improvements:

Improved housekeeping practices, product and process inspections, and the use of production unit control equipment or methods.

In-process, in-line, or closed-loop recycling:

Recycling, reuse, or extended use of toxic materials.

Pollution prevention emphasizes a multi-media waste reduction approach. Multi-media means the air, water, land, and workplace surroundings into which chemicals are released or transferred. The goal is to find waste solutions that do not transfer a chemical to a different media. The end result is a reduction in the quantity of toxic materials used or environmental wastes created in the first place.

Pollution Prevention Plans and Progress Reports

The Pollution Prevention Plan is a non-public document, which is updated every two years based on the addition and/or deletion of chemicals and includes:

- a policy statement by management in support of eliminating or reducing the generation or release of toxic pollutants at the facility;
- a description of current processes generating or releasing toxic pollutants;
- a description and evaluation of current and past practices used to reduce or eliminate the generation or release of toxic pollutants;
- an assessment of options available to reduce or eliminate toxic pollutant release or generation;
- a statement of (reduction/elimination) objectives and a schedule for achieving the objectives. The objectives may be numerical or non-numerical;
- an explanation of the rationale for each objective;
- a list of considered options that were rejected as economically or technically impracticable;
- a certification attesting to the accuracy of the plan.

The Progress Report is a public document submitted annually. It indicates a facility's progress toward meeting the objectives as stated in the Plan. The Progress Report includes:

- a summary of each objective (from the Plan) and a schedule for meeting the objective;
- a summary of progress made during the past year;
- a statement of methods used to reduce or eliminate generation or release of toxic pollutants;
- an explanation of reasons for not meeting objectives including technical, economic, or other barriers;
- a certification attesting to the existence of the Plan and the accuracy of the Progress Report.

The Minnesota EPCRA Program receives the annual Progress Reports and reviews them for completeness. If a Progress Report does not fulfill pollution prevention planning requirements, the TPPA provides a mechanism for the Director of Homeland Security and Emergency Management and the Office of Environmental Assistance (OEA) to review the Plan and, potentially, hold a public meeting on the Plan. Citizens may also request that the Director of Homeland Security and Emergency Management formally review a Plan, based on a petition which identifies deficiencies in the Progress Report.

Progress Reports for reporting years 1995-2003 are available for review at the Minnesota EPCRA Program office. Progress Reports for years prior to 1995 are available for review at the Minnesota Pollution Control Agency's Pollution Prevention and Sustainability Office.

Progress Report Issues

Approximately sixty percent of the reporting facilities have chosen to define non-numeric pollution prevention objectives. Discussions between the Minnesota EPCRA Program, OEA, MPCA, MNTAP, and regulated facilities have defined a number of factors which make it difficult for a facility to state numeric goals including:

- Rapid changes in the production processes and/or market demand makes quantitative prediction of future production difficult if not impossible.
- Some facilities have established facility-wide pollution prevention goals that do not lend themselves to the process by process reporting requirements of the TPPA.
- Some facilities have made significant reductions in the amounts of toxic chemicals generated or released in years prior to the TPPA requiring reporting. These efforts are not reflected in the current Progress Reports and further reductions are extremely difficult and expensive.
- Some chemicals are double counted because they are shipped from site to site for treatment, recovery, or recycling. This double counting reduces the ability of a facility to select a numeric goal because, if they receive chemicals for treatment, recovery or recycling from other facilities, then any reductions in releases at the other facilities appear as increased chemical management activities at the receiving facility.
- A number of facilities have upgraded their process technology to minimize releases of chemicals. This leaves accidental or unintentional releases as the primary chemical releases of concern; such releases are not predictable.
- Minnesota requires pollution prevention planning for the chemicals reported under Section 313 of SARA Title III. A number of facilities have found pollution prevention opportunities for non-Section 313 reported chemicals. This activity is not reflected in the Progress Reports.

Definitions

A sample of a statewide listing found on page 66 summarizes 2003 Progress Report information. A complete listing is available from the Minnesota EPCRA Program (651-297-7372). The following definitions will help to explain the information in the list:

Barriers to Pollution Prevention - the facility's pollution prevention efforts were hindered by certain factors (see page 65 for F code descriptions)

Baseline Quantity - quantity of releases and/or transfers associated with this chemical during the baseline year

Baseline Year - the year the facility chose to measure pollution prevention progress

Chemical - target chemicals for pollution prevention

ERC ID - number assigned to facilities by the Minnesota EPCRA Program

Facility Name - provided by the facility

Met Objective - pollution prevention success as reported by the facility

Numeric Objective / Releases and Transfers - the facility set an objective(s) to reduce the amount of the chemical generated or released that can be quantified. These numbers are obtained directly from the Pollution Prevention Plan. If no numbers are entered, the facility has elected to use the same numbers as reported in Sections 8.1 - 8.7 of their EPA Form R.

Non-numeric Objective - the facility set an objective(s) to reduce chemical release and/or transfer quantities that cannot be quantified

Process - process code(s) that generate the releases and/or transfers of this chemical (see page 63 for process (P) code descriptions)

P.R. - facility production ratio; that is the change in the level of business or production activity as compared to the previous year

Quantity Reported in 2002 & 2003 - actual quantity of this chemical reported on the EPA Form R (Sections 8.1 - 8.7) in 2002 and 2003

Source Reduction - describes the reduction activity code(s) that was used to meet pollution prevention objective (see pages 64-65 for source reduction (W) code descriptions)

P CODES PROCESS DESCRIPTIONS

P01	Casting any material
P02	Chemical mixing (denaturing, formulating, blending, etc.)
P03	Chemical transferring (packaging, metering, etc.)
P04	Chemical milling (etching)
P05	Cleaning any material (degreasing, washing, etc.)
P06	Combustion
P07	De-icing
P08	Developing (non-photographic)
P09	Drying
P10	Electroless/Immersion coating
P11	Electroplating
P12	Extruding any material
P13	Fiberglass product manufacturing
P14	Foam blowing
P15	Food processing (human and animal)
P16	Heat treating
P17	Laminating/Pressing any material
P18	Lens grinding
P19	Machining any material (polishing, routing, drilling, etc.)
P20	Metal melting
P21	Metal shredding
P22	Metal treating (anodizing, phosphating, pickling, etc.)
P23	Molding any material (bending, forming, shaping, etc.)
P24	Organic coating (painting, varnishing, adhesive, etc.)
P25	Paper manufacturing
P26	Photographic processing
P27	Printing
P28	Refining
P29	Refrigerating/Freezing
P30	Regenerating resin
P31	Smelting
P32	Sterilizing (fumigating, disinfecting, etc.)
P33	Stripping any coating
P34	Tanning
P35	Vacuum depositing (vapor, ion, epitaxy, etc.)
P36	Water treating (neutralizing, evaporating, etc.)
P37	Weatherizing (wood treating, corrosion inhibiting, etc.)
P38	Welding any material (soldering, brazing, joining, etc.)
P39	Other

W CODES SOURCE REDUCTION ACTIVITIES

Cleaning and Degreasing

- W59 Modified stripping / cleaning equipment
- W60 Changed to mechanical stripping / cleaning devices (from solvents or other materials)
- W61 Changed to aqueous cleaners (from solvents or other materials)
- W63 Modified containment procedures for cleaning units
- W64 Improved draining procedures
- W65 Redesigned parts racks to reduce dragout
- W66 Modified or installed rinse systems
- W67 Improved rinse equipment design
- W68 Improved rinse equipment operation
- W71 Other cleaning and degreasing modifications (Please explain)

Good Operating Practices

- W13 Improved maintenance scheduling, recordkeeping, or procedures
- W14 Change production schedule to maximize equipment and feedstock changeovers
- W19 Other changes in operating practices (Please explain)

Inventory Control

- W21 Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life
- W22 Began to test outdated material - continue to use if still effective
- W23 Eliminated shelf-life requirements for stable materials
- W24 Instituted better labeling procedures
- W25 Instituted clearinghouse to exchange materials that would otherwise be discarded
- W29 Other changes in inventory control (Please explain)

Process Modifications

- W51 Instituted recirculation within a process
- W52 Modified equipment, layout, or piping
- W53 Use of a different process catalyst
- W54 Instituted better controls on operating bulk containers to minimize discarding of empty containers
- W55 Changed from small volume containers to bulk containers to minimize discarding of empty containers
- W58 Other process modifications (Please explain)

Product Modifications

- W81 Changed product specifications
- W82 Modified design or composition
- W83 Modified packaging
- W89 Other product modifications (Please explain)

W CODES SOURCE REDUCTION ACTIVITIES (CONTINUED)

Raw Material Modifications

- W41 Increased purity of raw materials
- W42 Substituted raw materials
- W49 Other raw material modifications (Please explain)

Spill and Leak Prevention

- W31 Improved storage or stacking procedures
- W32 Improved procedures for loading, unloading, and transfer operations
- W33 Installed overflow alarms or automatic shutoff valves
- W35 Installed vapor recovery systems
- W36 Implemented inspection or monitoring program of potential spill or leak sources
- W39 Other spill and leak prevention (Please explain)

Surface Preparation and Finishing

- W72 Modified spray systems or equipment
- W73 Substituted coating materials used
- W74 Improved application techniques
- W75 Changed from spray to other system
- W78 Other surface preparation and finishing modifications (Please explain)

F CODES BARRIERS TO POLLUTION PREVENTION

- F01 Insufficient capital to install new source reduction equipment or implement new source reduction activities/initiatives
- F02 Lack of technical information on pollution prevention techniques applicable to the specific production process
- F03 Pollution prevention / source reduction is not economically feasible
- F04 Concern that product quality may decline as a result of source reduction
- F05 Technical limitations of the production process
- F06 Specific regulatory / permit burdens
- F07 Pollution prevention previously implemented - additional reduction does not appear to be technically feasible
- F08 Pollution prevention previously implemented - additional reduction does not appear to be economically feasible
- F09 Pollution prevention previously implemented - additional reduction does not appear to be feasible due to permitting requirements
- F10 Other

Attachment 12: Minnesota Pollution Prevention
Progress Report Summary of Activities for 2003

State of Minnesota
Department of Public Safety
Minnesota EPCRA Program

Sorted by County, City, Facility

Hennepin County, City of MARSHALL -- HIREL SYSTEMS, LLC -- 604 W. ERIE ROAD

Chemical	Baseline Year	Quantity	Numeric Objective, If Applicable /				Releases and Transfers (#) Reported	P.R.	Met
			2002	2003	2004	2005			
Lead	2003	199						No	

Process P38 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)
 Intended Activity
 W42 SUBSTITUTED RAW MATERIALS
 W81 CHANGED PRODUCT SPECIFICATIONS
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
 Employed Activity
 W81 CHANGED PRODUCT SPECIFICATIONS
 W82 MODIFIED DESIGN OR COMPOSITION

Barriers to P2: F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS
 F10 IT IS NOT TECHNICALLY OR ECONOMICALLY FEASIBLE TO USE LEAD FREE SOLDER AT THIS TIME. DUE TO CUSTOMER SPECIFICATIONS, IT IS DIFFICULT FOR US TO USE ALTERNATIVE RAW MATERIALS.

ANOKA County, City of ANOKA -- ALTRON, INC. -- 6700 BUNKER LAKE BLVD. NW

Chemical	Baseline Year	Quantity	Numeric Objective, If Applicable /				Releases and Transfers (#) Reported	P.R.	Met
			2002	2003	2004	2005			
Lead Compounds	2003	1003					2002 1,281	No	

Process P38 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)
 Intended Activity
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
 Employed Activity
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Non Numeric Objective: WE WILL CONTINUE TO KEEP WASTE MATERIAL DOWN BY EFFICIENT USE OF OUR EQUIPMENT. THE AMOUNT OF LEAD MAY GO UP FROM THE BASELINE DUE TO INCREASED CUSTOMER DEMANDS.

Non Numeric Progress: NO DATA SINCE OUR BASELINE STARTED IN 2003.

Barriers to P2: F10 OUR BASELINE IS 2003. WHEN MULTIPLYING THE PRIOR YEAR BY THE PRODUCTION RATIO AND SUBTRACT THE CURRENT YEAR I HAVE A POSITIVE NUMBER. THIS MAY BE CAUSED BY THE AMOUNT OF PRODUCTION BEING BUILT.

ANOKA County, City of ANOKA -- BALLANTINE, INC. - DIVISION OF US TSUBAKI INC. -- 840 MCKINLEY STREET

Chemical	Baseline Year	Quantity	Numeric Objective, If Applicable /				Releases and Transfers (#) Reported	P.R.	Met
			2002	2003	2004	2005			
Chromium	2002	1407					2002 1,407	No	

Attachment 13: Facilities not subject to Pollution Prevention Progress Reporting in 2003

<u>Facility Name and Location</u>	<u>County</u>	<u>ERC ID #</u>
Team Industries, Audubon	Becker	03-009-0005
The Dotson Company, Inc., Mankato	Blue Earth	07-100-0082
General Mills Operations, Inc., Chanhassen	Carver	10-030-0011
Pemstar Inc., Chaska	Carver	10-035-0054
Busch Agricultural Resources, Inc., Moorhead	Clay	14-145-0010
Mac Mfg. Inc., Brainerd	Crow Wing	18-015-0089
Centerpoint Energy - Dakota Station, Burnsville	Dakota	19-006-0029
Hanson Pipe & Products, Inc., Apple Valley	Dakota	19-002-0003
Alexandria Extrusion Co., Alexandria	Douglas	21-005-0057
Natural Biologics LLC, Albert Lea	Freeborn	24-005-0082
934th Airlift Wing Reserve Stn., IAP, Minneapolis	Hennepin	27-999-0021
Applied Coating Technology, Inc., Eden Prairie	Hennepin	27-056-0004
Foam Enterprises, Inc., Plymouth	Hennepin	27-180-0069
General Mills Inc./Purity Oats, Minneapolis	Hennepin	27-135-0249
Hanson Spancrete Midwest Inc., Maple Grove	Hennepin	27-115-0036
Hutchinson Technology Inc., Plymouth	Hennepin	27-180-0078
James Ford Bell (General Mills), Golden Valley	Hennepin	27-070-0003
Midwest Finishing, Brooklyn Park	Hennepin	27-015-0090
Olidyne/Parker, New Hope	Hennepin	27-165-0055
Twin City Optical Co., Plymouth	Hennepin	27-180-0111
Team Industries, Park Rapids	Hubbard	29-120-0041
Cambria, Le Sueur	Le Sueur	40-070-0043
CHS Oilseed Processing, Fairmont	Martin	46-035-0043
Anderson Chemical Co., Litchfield	Meeker	47-100-0005
McNeilus Truck & Mfg., Inc. (Composites), Dexter	Mower	50-039-0015
Seneca Foods Corp., Rochester	Olmsted	55-095-0016
Bongards' Creameries, Perham	Otter Tail	56-319-0002
GE Interlogix, St. Paul	Ramsey	62-070-0417
Gerdau Ameristeel Recycling, St. Paul	Ramsey	62-070-0334
Schroeder Milk Co., Inc., Maplewood	Ramsey	62-035-0013
Certainteed Corp., Shakopee	Scott	70-085-0005
Shakopee Valley Printing, Shakopee	Scott	70-085-0059
Xcel Energy - Becker RDF Ash Landfill, Becker	Sherburne	71-009-0018
Heartland Corn Products, Winthrop	Sibley	72-120-0010
MTD Acquisition, Inc., Chisholm	St Louis	69-095-0008
U.S. DOD USAF ANG AFB, Minnesota, Duluth	St Louis	69-125-0230
SPX Service Solutions, Owatonna	Steele	74-070-0001
SPX Service Solutions Tools & Equip., Owatonna	Steele	74-070-0146
Wenger Corp., Owatonna	Steele	74-070-0019
Land O'Lakes Dairy Foods, Lake City	Wabasha	79-099-0001
Dean Foods North Central, Inc., Woodbury	Washington	82-191-0001
TRW Automotive - Machine Bldg. Div., Winona	Winona	85-145-0085

VI. MINNESOTA'S INDEXING SYSTEM

The following information is republished from the Minnesota Pollution Control Agency's (MPCA) "Air Pollutants-Strategy Update and Facility Emission Profile," January 1995, and from the article "An Indexing System For Comparing Toxic Air Pollutants Based Upon Their Potential Environmental Impacts," by Pratt et al **, 1993, used with permission.

In response to the need for a procedure to evaluate the potential environmental impacts of chemicals released to the air and to help prioritize regulatory work involving the toxic air pollutants, the MPCA has developed a method for comparing toxic air emissions. This method is referred to as the Indexing System and it incorporates information about the environmental fate and the toxicity (to humans and other species) of chemicals emitted into the air. The environmental fate of a substance depends upon its physical and chemical characteristics and encompasses phenomena such as transport, persistence, partitioning among environmental compartments (water, air, land, biota), and bioaccumulation. Toxicity is the potential of a substance to cause an adverse effect on the health of a human or other organism.

The Indexing System does not predict whether an effect will occur; it compares chemicals in terms of their potential to be hazardous. The Indexing System assigns numerical values to substances according to the hazard potential of the substance in any of several environmental compartments following emission into the air. The numerical value assigned to a chemical is the result of a standardized modeling scenario that predicts the potential exposure of humans or other organisms to the chemical. Depending upon the chemical, any one of a set of possible routes of uptake is evaluated in the modeling process to determine the highest potential impact from the chemical.

The environmental exposure is estimated for a number of environmental compartments using a level 3 fugacity model developed for Minnesota by Professor Don Mackay of the University of Toronto. Human intake values are taken from standard U.S. Environmental Protection Agency (EPA) values, and human toxicity is estimated using values from EPA's Integrated Risk Information System (IRIS) and Health Effects Assessment Summary Tables (Threshold Limit Values (TLVs) are used if no other values are available). Ecological toxicity is estimated for aquatic organisms using MPCA Water Quality Division Final Acute Values, and for fish-eating wildlife using a method developed by the Great Lakes Initiative. The ranking of potential environmental impact of chemicals released into the air is done by combining toxicity and environmental fate information. The quality of environmental fate and toxicity data varies among chemicals. The MPCA has applied the Indexing System to over 183 substances.

$$\text{Index} = \frac{\text{Potential exposure}}{\text{Toxicity}} = \text{Hazard Potential}$$

Discussion of the Indexing System Results

It is important to recognize that the Indexing System does not predict actual concentrations that are expected to occur in the environment. The environmental fate modeling assumed a standard emission of ten kilograms per hour to the air compartment. That amount is much greater than actual emissions of some substances and much less than emissions of others. Thus the modeling results do not represent actual concentrations of pollutant that can be expected to occur. Also, the index results cannot be viewed as indicating whether effects will occur. Instead, the value of the Indexing System is in comparing chemicals to see which is likely to be more hazardous and where in the environment that hazard is most likely to occur.

The MPCA views the modeling of organic substances with greater confidence than the modeling of inorganics or metals. Current models are not able to simulate the intricacies of the speciation process. The present modeling is based on total metal concentration, and the speciated forms were not considered. However, models

for speciated forms of mercury and other metals are being evaluated. The acidification caused by inorganic (as well as organic) acidity was not factored into this method.

Despite the many difficulties of compiling this Indexing System, the benefits and potential uses are numerous. The MPCA is using results from the Indexing System to develop air toxics regulations and to assist the MPCA in setting program goals. The Indexing System may be used to assist in:

- Setting thresholds for inventory and registration requirements;
- Setting air emissions fees using hazard-based fee rates (rather than a flat rate);
- Setting thresholds for environmental monitoring and testing requirements;
- Identifying environmentally persistent and bioaccumulating chemicals that require further study;
- Refining environmental monitoring needs;
- Identifying emission reduction goals; and
- Setting priorities for facility review.

To summarize, the Indexing System provides a method for comparing the potential environmental impacts of toxic substances emitted into the air. The system does not predict actual concentrations or toxicity, but rather allows a comparison of substances according to their potential to cause a hazard in the environment. The system also indicates where in the environment a substance is most likely to cause harmful effects. The system is useful in setting priorities and to those involved in developing, manufacturing and regulating toxic pollutants. For more information on this system, please contact Greg Pratt of the MPCA at 651-296-7664.

(** Gregory Pratt, Paul Gerbec, Sherryl Livingston, Fardin Oliaei, George Bollweg, Sally Paterson, and Donald Mackay)

Application of Indexing System to Air Emissions from TRI Data

For this report, the Minnesota EPCRA Program applied the Indexing System Values (weighted emissions) to state-wide air emissions from the 2003 Minnesota Toxic Release Inventory. The next four pages rank emissions by mass and hazard potential, and includes the following information:

- Chemical (Substance) name
- Rank: State-wide ranking by hazard potential
- Total Amount of Air Emissions: Total pounds of air emissions reported on 2003 Form R(s)
- Index Value: Index of hazard potential; the larger the index value, the greater the hazard potential
- Index Weighted Emissions: Product of application of index value to total air emissions
- Basis for the Index: Primary environmental area of concern (including human exposure)

**Attachment 14: Chemicals released for the year 2003
in order from the largest to the smallest total air releases
Sections: 5.1, 5.2 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program**

(Amount in pounds)

Chemical	Fugitive Air	Stack Air	Total Air Releases
AMMONIA	629,873	1,203,007	1,832,880
N-HEXANE	221,572	1,500,164	1,721,736
METHANOL	101,574	1,608,548	1,710,122
STYRENE	458,529	658,344	1,116,873
HYDROCHLORIC ACID (AEROSOL FORMS ONLY)	24,087	774,651	798,738
XYLENE (MIXED ISOMERS)	166,423	611,023	777,446
TOLUENE	164,176	612,865	777,041
1,1-DICHLORO-1-FLUOROETHANE	591,000	66,000	657,000
GLYCOL ETHERS	102,748	412,850	515,598
N-BUTYL ALCOHOL	84,864	400,486	485,350
METHYL ETHYL KETONE	50,820	351,342	402,162
ACETALDEHYDE	1,505	364,454	365,959
FORMALDEHYDE	30,387	322,307	352,694
HYDROGEN FLUORIDE	261	258,097	258,358
SULFURIC ACID (AEROSOL FORMS ONLY)	267	248,014	248,281
TRICHLOROETHYLENE	35,479	191,579	227,058
1-CHLORO-1,1-DIFLUOROETHANE	126,264	0	126,264
ETHYLBENZENE	29,425	84,439	113,864
BARIUM	78	109,526	109,604
METHYL ISOBUTYL KETONE	16,669	88,532	105,201
1,2,4-TRIMETHYLBENZENE	37,366	65,691	103,057
TETRACHLOROETHYLENE	12,974	85,838	98,812
ACROLEIN	0	78,746	78,746
DICHLOROMETHANE	11,414	58,385	69,799
BARIUM COMPOUNDS	654	63,326	63,980
PHENOL	3,581	58,178	61,759
METHYL METHACRYLATE	35,948	6,412	42,360
PROPYLENE	35,365	6,716	42,081
CYCLOHEXANE	6,276	26,747	33,023
BENZENE	20,924	9,317	30,241
NITRIC ACID	2,595	25,014	27,609
CHLORINE DIOXIDE	10	25,503	25,513
FORMIC ACID	9,819	10,220	20,039
NICKEL COMPOUNDS	723	19,272	19,995
N,N-DIMETHYLFORMAMIDE	814	18,550	19,364
ZINC COMPOUNDS	5,538	13,659	19,197
N-METHYL-2-PYRROLIDONE	439	18,748	19,187
COPPER	9,262	9,239	18,501
ETHYLENE GLYCOL	14,937	906	15,843
MANGANESE COMPOUNDS	2,806	11,780	14,586
ACRYLIC ACID	215	14,072	14,287
CARBONYL SULFIDE	2	12,750	12,752
2-ETHOXYETHANOL	550	10,899	11,449
BROMOMETHANE	11,315	0	11,315
LEAD COMPOUNDS	1,234	9,447	10,681
NAPHTHALENE	10,031	453	10,484
VANADIUM COMPOUNDS	280	7,392	7,672
COPPER COMPOUNDS	113	7,243	7,356

**Attachment 14: Chemicals released for the year 2003
in order from the largest to the smallest total air releases
Sections: 5.1, 5.2 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in pounds)**

Chemical	Fugitive Air	Stack Air	Total Air Releases
CHLORODIFLUOROMETHANE	6,924	0	6,924
ETHYLENE	5,100	1,542	6,642
DIISOCYANATES	336	4,084	4,420
ALUMINUM (FUME OR DUST)	3,035	742	3,777
MANGANESE	862	2,518	3,380
CHROMIUM COMPOUNDS	438	2,652	3,090
CHLORINE	1,582	984	2,566
POLYCYCLIC AROMATIC COMPOUNDS	1,565	849	2,414
1,4-DIOXANE	255	2,100	2,355
BUTYL ACRYLATE	28	2,194	2,222
TERT-BUTYL ALCOHOL	2	2,156	2,158
1,3-BUTADIENE	1,068	933	2,001
LEAD	237	1,761	1,997
CYANIDE COMPOUNDS	500	1,341	1,841
MERCURY COMPOUNDS	4	1,824	1,828
2-CHLORO-1,1,1,2-TETRAFLUOROETHANE	0	1,697	1,697
4,4'-ISOPROPYLIDENEDIPHENOL	0	1,660	1,660
CUMENE	1,249	222	1,471
COBALT COMPOUNDS	34	1,166	1,200
CHROMIUM	219	945	1,164
CRESOL (MIXED ISOMERS)	16	1,080	1,096
PHTHALIC ANHYDRIDE	21	1,025	1,046
MALEIC ANHYDRIDE	13	1,031	1,044
ETHYL ACRYLATE	772	151	923
PERACETIC ACID	35	633	668
DICYCLOPENTADIENE	34	587	621
TOLUENE DIISOCYANATE (MIXED ISOMERS)	170	350	520
MOLYBDENUM TRIOXIDE	195	305	500
PROPYLENE OXIDE	6	440	446
NICKEL	111	312	423
ARSENIC COMPOUNDS	10	260	270
CHLOROTRIFLUOROMETHANE	255	0	255
NITRATE COMPOUNDS (WATER DISSOCIABLE)	0	255	255
DI(2-ETHYLHEXYL) PHTHALATE	255	0	255
ETHYLENE OXIDE	100	100	200
DIMETHYL PHTHALATE	0	199	199
ANTIMONY COMPOUNDS	10	179	189
ZINC (FUME OR DUST)	40	139	179
BIPHENYL	84	9	93
VINYL ACETATE	7	70	77
BENZO(G,H,I)PERYLENE	13	57	69
MERCURY	36	23	59
PHENANTHRENE	2	51	53
DIBENZOFURAN	0	46	46
1,2-DICHLOROETHANE	7	24	31
SELENIUM COMPOUNDS	2	27	29
ANTIMONY	14	13	27
CARBON DISULFIDE	1	21	22

**Attachment 14: Chemicals released for the year 2003
in order from the largest to the smallest total air releases
Sections: 5.1, 5.2 of EPA Form "R"**

**State of Minnesota
Department of Public Safety
Minnesota EPCRA Program
(Amount in pounds)**

Chemical	Fugitive Air	Stack Air	Total Air Releases
ANTHRACENE	17	4	21
1,2-DIBROMOETHANE	0	18	18
ARSENIC	7	7	14
PENTACHLOROPHENOL	7	2	9
COBALT	0	5	5
TRIETHYLAMINE	0	4	4
TETRABROMOBISPHENOL A	0	1	1
ACETONITRILE	0	1	1
POLYCHLORINATED BIPHENYLS	0	0	0
SODIUM DIMETHYLDITHIOCARBAMATE	0	0	0
NABAM	0	0	0
1,3-PHENYLENEDIAMINE	0	0	0
DECABROMODIPHENYL OXIDE	0	0	0
CATECHOL	0	0	0
PHOSPHORUS (YELLOW OR WHITE)	0	0	0
4,4'-METHYLENEDIANILINE	0	0	0
NITROGLYCERIN	0	0	0
HEXACHLOROBENZENE	0	0	0
CHLOROMETHANE	0	0	0
SODIUM NITRITE	0	0	0
Totals	3,096,863	10,579,528	13,676,391

Attachment 15: Air Toxics Indexing System

Substance	Rank	Total Amount (pounds/yr) of Air Emissions	Index Value (log units)	Index (pounds/yr) Weighted Emissions	Basis for the Index
mercury	1	1886	19.80	23.08	water
lead (Pb)	2	12678	15.55	19.65	water
copper	3	25857	15.06	19.48	water
dioxins (total 2,3,7,8 congeners)	4	0.023733	21.09	19.47	terr flora
nickel	5	20418	14.96	19.27	aq biota
chromium (VI)*	6	4254	15.63	19.26	water
zinc	7	19376	14.03	18.32	water
acrolein	8	78746	13.24	18.14	air
barium	9	173584	12.69	17.93	water
antimony	10	216	15.53	17.86	aq biota
manganese	11	17966	13.38	17.64	water
bromomethane (methy bromide)	12	11315	13.50	17.55	air
aluminum	13	3777	13.96	17.53	water
arsenic	14	284	15.08	17.53	aq biota
tetrachloroethylene	15	98812	12.30	17.29	air
dichloromethane (methylene chloride)	16	69799	12.32	17.17	air
selenium	17	29	15.35	16.81	water
acetaldehyde	18	365959	10.96	16.52	air
formaldehyde	19	352694	10.91	16.45	air
trichloroethylene	20	227058	11.09	16.45	air
1,2-dibromoethane	21	18	14.75	16.01	air/UR
acrylic acid	22	14287	11.74	15.90	air
hexane (n-)	23	1721736	9.57	15.81	air
chromium (III)*	24	4254	12.12	15.75	water
styrene	25	1116873	9.63	15.68	air
ammonia	26	1832880	9.39	15.66	air
butadiene (1,3-)	27	2001	12.35	15.66	air
benzene	28	30241	11.16	15.65	air
1,2-dichloroethane	29	31	13.89	15.38	air/UR
methyl ethyl ketone (MEK)	30	402162	9.70	15.31	air
hydrogen chloride	31	798738	9.40	15.30	air
pentachlorophenol	32	9	14.20	15.15	terr flora/SF
chlorine dioxide	33	25513	10.71	15.12	air
propylene oxide	34	446	12.19	14.84	air
diethylhexylphthalate (2-)	35	255	12.42	14.82	water
methyl isobutyl ketone (MIBK)	36	105201	9.76	14.79	air
xylene	37	777446	8.77	14.66	air
toluene	38	777041	8.64	14.53	air
ethylbenzene	39	113864	8.95	14.00	air
ethylene oxide	40	200	11.67	13.97	air

Attachment 15: Air Toxics Indexing System

Substance	Rank	Total Amount (pounds/yr) of Air Emissions	Index Value (log units)	Index (pounds/yr) Weighted Emissions	Basis for the Index
methanol	41	1710122	7.50	13.73	water
chlorine	42	2566	10.22	13.63	air
cumene (isopropyl benzene)	43	1471	10.44	13.61	air
toluene 2,4-diisocyanate	44	520	10.88	13.60	air/TLV
ethoxyethanol (2-, = "cellosolve")	45	11449	9.44	13.50	air
phenol	46	61759	8.45	13.24	water
n-butyl alcohol	47	485350	7.50	13.19	water
trimethylbenzene	48	103057	8.16	13.17	air/TLV
dimethylformamide (n,n-)	49	19364	8.74	13.03	air
carbon disulfide	50	22	11.39	12.73	air
tert-butyl alcohol	51	2158	9.30	12.63	air
naphthalene	52	10484	8.48	12.50	water
sulfuric acid	53	248281	7.10	12.49	air
cyclohexane	54	33023	7.94	12.46	air
ethyl acrylate	55	923	9.18	12.15	water
cresol/cresylic acid	56	1096	8.82	11.86	air/TLV
ethylene glycol	57	15843	7.26	11.46	water
dibenzofuran	58	46	9.05	10.71	air
vinyl acetate	59	77	8.79	10.68	air
maleic anhydride	60	1044	7.63	10.65	water
triethylamine	61	4	9.82	10.42	air/Rfc
dimethyl phthalate	62	199	7.67	9.97	water
phthalic anhydride	63	1046	6.03	9.05	terr flora
methyl methacrylate	64	42360	3.79	8.42	water
biphenyl (diphenyl)	65	93	3.97	5.94	aq biota
anthracene	66	21	4.05	5.37	water
chromium (total)*	67	4254	0.00	3.63	air

(* refers to the total amount of chromium and compounds)

VII. Common Uses of Toxic Chemicals and Their Potential Hazards

The following information is presented as a quick-reference summary of information for some of the toxic chemicals that are manufactured/processed or otherwise used by TRI facilities in Minnesota. It is not a detailed discussion on the uses of and/or potential hazards posed by the chemicals. This information is from "Hazardous Substance Fact Sheets" provided by the New Jersey Department of Health and distributed by the United States Environmental Protection Agency (Office of Toxic Substances and Office of Pollution Prevention and Toxics (OPPT) Chemical Fact Sheets), Computer Aided Management of Emergency Operations (CAMEO), and from "A Comprehensive Guide to the Hazardous Properties of Chemical Substances," by Dr. Pradyot Patnaik. The reader should consult chemical or toxicology reference materials if interested in knowing more about any or all of the substances presented in this report.

Acetaldehyde: Used as a liquid in making acetic acid, pyridine, pentaerythritol, peracetic acid and related chemicals. It occurs naturally in ripe fruit, coffee and cigarette smoke. **Hazard**: inhalation can irritate respiratory system, affect the cardiovascular system; liquid or vapor irritates skin and eyes.

Acrylic Acid: Used as a liquid in making acrylic esters, resins, protective surface coatings, adhesives; oil treatment chemicals, detergent intermediates and water treatment chemicals. It occurs naturally in marine algae and the stomach of sheep. **Hazard**: inhalation of vapors for short periods of time irritates the respiratory system, direct contact with liquid irritates skin and eyes.

Aluminum (fume or dust): Used as a powder in paints and protective coatings, as a catalyst and in rocket fuel. **Hazard**: fine powders form flammable and explosive mixtures in air and with powerful oxidants; moderately flammable/explosive by heat, flame or chemical reaction with powerful oxidizers.

Aluminum Oxide: Used in production of aluminum, abrasives, paint, ceramics, electrical insulators, catalysts and light bulbs. **Hazard**: dust toxic by inhalation.

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

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

Antimony compounds: Used in manufacture of alloys, white metals and hard lead; bullets, fireworks and for coating metals. **Hazard**: Low order poison by ingestion, inhalation and intraperitoneal (injection) routes; can irritate eyes, nose, throat and skin.

Barium and compounds: Used in vacuum and x-ray tubes and spark plugs. **Hazard**: powder is flammable at room temperature; can irritate eyes, nose and throat.

Benzene: Is a liquid used manufacturing other chemicals, solvent and in gasoline. **Hazard**: Flammable liquid, fire hazard; can affect when breathed in or by passing through the skin.

Biphenyl: Users are thought to be textile mills, in past a heat transfer agent, to make polychlorinated biphenyls and a treatment for paper used to pack citrus fruit. **Hazard**: Exposure for short periods of time can cause nausea, vomiting, irritation of eyes and respiratory tract and bronchitis.

Bromomethane: Used as a pest control, degreasing wool. **Hazard**: Exposure can cause headache, weakness, nausea, vomiting, pulmonary edema, tremor, convulsions, hypothermia, and coma.

1, 3-Butadiene: Is a gas (above 23 degrees F) or liquid used in making rubber products and chemicals. **Hazard**: Flammable and reactive; exposure can irritate the eyes, nose, mouth and throat; liquid may irritate the skin and cause frostbite; vapor can cause lightheadedness or pass out.

n-Butyl Alcohol: liquid used as a solvent for fats, waxes, shellac, resins, gums and varnish. **Hazard**: Flammable liquid and fire hazard; can damage liver, kidneys, hearing and sense of balance; can cause eye irritation and headaches, irritation to nose, throat may occur.

Cadmium Compounds: Used in dyeing and printing textiles, TV phosphors, pigments, enamels; semiconductors and solar cells. **Hazard**: Exposure can cause nausea, vomiting, diarrhea, headache, abdominal pain, muscular ache, salivation and shock.

Carbon Disulfide: Liquid used to make rayon, agricultural fumigants, rubber chemicals, and cellulose; clean metal surfaces and extract olive oil. **Hazard**: Adversely effects the nervous system; dizziness, headaches, blurred vision, agitation, convulsions, coma and death; vapor irritates the nose and throat; liquid causes chemical burns, damage to eyes.

Carbon Tetrachloride: is a carcinogen; used as a solvent; in making fire extinguishers, refrigerants and aerosols. **Hazard**: exposure can cause dizziness and lightheadedness rapidly; also damage to liver and kidneys enough to cause death; can produce poisonous phosgene and hydrogen gases when heated.

Carbonyl Sulfide: Gas used in pesticides. **Hazard**: Exposure can cause headaches, giddiness, dizziness, confusion, nausea, diarrhea, weakness and muscle cramps; can cause lose of consciousness and stop breathing.

Chlorinated Fluorocarbon (Freon 113): Used to clean metal surfaces, until recently as a coolant in air conditioners, aerosols sprays, high temperature lubricants and resins. **Hazard**: inhalation adversely affects nervous system, dizziness to incoordination and irregular heart beat. Not likely to occur at levels in environment.

Chlorine: Used as a disinfectant, in purifying water, and in manufacturing of synthetic rubber & plastics. **Hazard**: Intensely irritating to respiratory tract & can cause damage to tissues.

Chlorothalonil: Used as a pesticide/fungicide. **Hazard** : Can irritate skin & eyes, Breathing irritates nose, throat & lower air passages, may cause nose bleeds, skin rash, blood in urine or vaginal bleeding.

Chlorine Dioxide: Used for bleaching wood pulp, oils, textiles and flour; and in water treatment. **Hazard**: Irritation of nose and throat; chest pain, cough, bloody nose and sputum; pulmonary edema; eye irritation can occur.

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

Chloroform: Used as a cleansing agent, manufacture of refrigerant and fire extinguishers. **Hazard**: dizziness, lightheadedness, dullness, hallucination, nausea, headache, fatigue and anesthesia.

Chromium and Compounds: Use: chrome plating other metals, tanning leather.

Hazard: Confirmed as a human carcinogens.

Cobalt: Used in radiation therapy, level gages, steel alloys, jet engines, tools, cemented carbide abrasives.

Hazard: can cause coughing, wheezing, chest pains and shortness of breath; irritate eyes, nose, throat and lungs; may cause fluid in the lungs (pulmonary edema).

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

Cumene: Used in chemical synthesis; a solvent. **Hazard:** flammable; moderately toxic by ingestion, mildly toxic by inhalation and contact; eye and skin irritant; narcotic in high concentrations.

Cyanide Compounds: Used for electroplating metals; for extracting gold and silver from ores: as a fumigant, and a chelating agent. **Hazard:** Ingestion of a small quantity could result in immediate collapse and instantaneous death. At a lower dosage it can cause nausea, vomiting, hallucination, headache, and weakness.

Cyclohexane: Used as a solvent for lacquers and resins, paint and varnish remover, in manufacture of adipic acid, benzene, nitrocyclohexane and cyclohexanone.

Hazard: Acute toxicant of low order; irritant to the eyes and respiratory system.

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

Dichlorotetrafluoroethane: Used as a solvent, refrigerant and air conditioner and in fire extinguishers.

Hazard: Moderately toxic by inhalation; irritant; an asphyxiant.

Di (2-ethylhexyl) phthalate: Used to make plastics, products found in homes and automobiles, medical and packaging industries. **Hazard:** Is a carcinogen and teratogen; short term may cause irritation to eyes, nose, and throat; long term cause liver cancer; may damage the testes, affect the kidneys and liver ;may cause numbness and tingling in the arms and legs.

Dimethylamine: Used in detergent soaps, tanning & vulcanizing rubber. **Hazard:** Corrosive to eyes, skin, mucous membranes. Mutation data reported, poison by ingestion, mild toxic by inhalation.

1,4-Dioxane: Used as a solvent, and in textile processing, printing processes and detergent preparations.

Hazard: is a carcinogen; can cause lightheadedness, dizzy and pass out, irritation of nose, throat and air passages, high or repeated overexposure can cause upset stomach and serious liver and kidney damage.

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

Ethyl Acrylate: Used in manufacture of acrylic resins, acrylic fibers, textile and paper coatings, adhesives, and leather finish resins; and as a flavoring agent. **Hazard:** Flammable liquid; flash point is 60 degrees F: strong irritant to eyes, skin and mucous membranes; liquid can produce skin sensitization, toxic by all routes of exposure.

Ethylene: Used in welding and cutting metals; the manufacture of polyethylene, polystyrene, and other plastics; making ethylene oxide; and as an inhalation anesthetic.

Hazard: can cause asphyxiation and unconsciousness; flammable gas.

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

Ethylene Oxide: Used as a sterilizing agent; a fumigant; a propellant; in the production of explosives; in the manufacture of ethylene glycol, polyethylene oxide, glycol ethers, crown ethers, ethanolamines; and other derivatives; and organic synthesis.

Hazard: Severe irritant, toxic and carcinogenic compound; inhalation can cause severe irritation to eyes, respiration tract and skin; delayed symptoms may be nausea, vomiting, headache, dyspnea, pulmonary edema, weakness and drowsiness.

Formaldehyde: Used in manufacture of phenolic resins, cellulose esters, artificial silk, dyes, explosives and organic chemicals; also germicide, fungicide and disinfectant; in tanning, adhesives, waterproofing fabrics, and tonic and chrome printing in photography.

Hazard: can injure eyes, skin and respiratory system; is a mutagen, teratogen, and probably carcinogenic.

Formic Acid: Used in manufacture of esters and salts, dyeing finishing of textiles and papers, electroplating, treatment of leather, coagulating rubber latex and a reducing agent.

Hazard: is corrosive to skin, vapors may produce irritation to eyes, skin and mucous membranes and causing respiratory distress.

Glycol Ethers: Solvents. **Hazard:** Toxic by inhalation, ingestion or skin absorption; irritating to eyes, nose, throat and skin.

Hexachloroethane: Used in explosives, celluloid, rubber vulcanizing, and as a solvent.

Hazard: Can irritate the skin, burn the eyes; irritate the eyes, nose, mouth and throat; may cause dizziness, lightheadedness and pass out.

Hexane: chief constituent of petroleum ether, gasoline and rubber solvent; also solvent for adhesives, vegetable oils, in organic analysis; and denaturing alcohol.

Hazard: may produce hallucination, distorted vision, headache, dizziness, nausea and irritation of eyes and throat.

Hydrochloric Acid: Used in metal cleaning and pickling, food processing and general cleaners. **Hazard:** Very corrosive, toxic by ingestion or inhalation; can irritate mouth, nose and throat.

Hydrogen Fluoride: Used as a catalyst in petroleum industry, fluorination processes in aluminum industry; make fluorides, separation of uranium isotopes; making plastics and production of dyes. **Hazard:** Is a corrosive chemical; can irritate nose, throat and lungs; causing pulmonary edema; can cause severe burns to skin and eyes; may damage kidneys and liver.

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

Manganese and compounds: In aluminum production, steel making, metal purification and dry cell batteries. compounds used for varnishes, fertilizers, food additives.

Hazard: dust is flammable and moderately explosive; toxic by inhalation.

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

Methyl Acrylate: Manufacture of plastic films, textiles, paper coatings and other acrylate ester resins; amphoteric surfactants. **Hazard**: strong irritant, prolonged contact with eyes and skin may cause sever damage; inhalation can cause lacrimation, irritation of respiratory tract, lethargy and convulsions.

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

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

Methyl Methacrylate: Used to make resins, plastics and specifically plastic dentures. **Hazard**: Flammable, reactive chemical; fire and explosion hazard; may damage fetus, can cause dizziness, lightheadedness, pass out; irritate eyes, skin, nose and throat.

Methyl Tert-Butyl Ether: Hazard: toxic effects as cellular necrosis, respiratory system. Increased liver & kidney weights, severity of spontaneous renal lesions, prostration & swollen periocular tissue.

Maleic Anhydride: Used for coating automobile bodies; making other chemicals and detergents. **Hazard**: can cause sever burns to the skin and eyes; dust or vapor may irritate nose, throat and lungs.

Molybdenum Trioxide: Used in agriculture; manufacture of metallic molybdenum, ceramic glazes, enamels, pigments and in analytical chemistry. **Hazard**: Dust or vapor can irritate nose, throat and bronchial tubes; eye or skin contact can cause irritation.

Naphthalene: Used as a moth repellent; in scintillation counter; in the manufacture of naphthol, phthalic anhydride and halogenated naphthalenes; dyes, explosives and lubricants; in breaking emulsion. **Hazard**: may cause irritation of eyes, skin, respiratory tract and injury to the cornea; may effect eyes, liver, kidney, blood, skin and central nervous system.

Nickel and Compounds: Used in alloying and electroplating, catalysts, dyes textile printing. **Hazard**: is a carcinogen and poison; also its compounds.

Nitrate Compounds: Will accelerate the burning of combustible materials; if involved in a fire an explosion may result, may react violently with fuels. **Hazard**: May cause burns to skin and eyes; may produce irritating or poisonous gasses.

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

Pentachlorophenol: Used for a termite control, defoliant, preservant of wood and wood products. **Hazard**: are headache, dizziness, sweating, nausea, vomiting, dyspnea, chest pain , weakness, fever, collapse, convulsions and heart failure.

Peracetic Acid: Used in bleaching textiles, paper, waxes and starch; as a bactericide in food processing; catalyst for epoxy resins. **Hazard**: Can cause severe irritation and burns to eyes; can irritate skin, nose, throat and lungs and pulmonary edema.

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

Phthalic anhydride: Used to make phthalic plasticizers, Unsaturated polyester resins and alkyd resins; manufacture of dyes, saccharin, flame retardants, phenol-phthalin, pesticides and anthranilic acid. **Hazard**: may cause severe burns to eye, nose, throat and skin

Propylene: Used in the production of fabricated polymers, fibers, solvents, resins and plastic products. **Hazard**: Highly flammable; an asphyxiant.

Propylene Oxide: Used as a fumigant for foodstuffs, stabilizer for fuels, heating oils and chlorinated hydrocarbons. **Hazard**: Vapors can cause irritation to eyes, skin and mucous membranes.

Selenium: Manufacture of colored glass, in photocells, semiconductors, rectifier in radio and TV sets and as a vulcanizing agent in rubber. **Hazard**: irritating to eyes, nose and respiratory tract.

Sodium Nitrite: Used in solid propellants, explosives, fertilizers & other uses. **Hazard**: Will accelerate burning materials, if in fire may explode. Toxic oxides produced in fires.

Styrene: Used in the manufacture of polystyrene, resins, protective coatings, plastics, synthetic rubber and an insulator. **Hazard**: toxic by ingestion and inhalation; can react vigorously with oxidizing agents; emits acrid smoke and irritating fumes when heated to decomposition.

Sulfuric Acid: In fertilizers, chemicals, dyes, rayon and film; widely used by metals industry. **Hazard**: moderately toxic by ingestion; a severe eye irritant, extremely irritating, corrosive and toxic to tissue.

Tetrachloroethylene: Used as a solvent, in dry-cleaning and metal degreasing. **Hazard**: can produce headache, dizziness, drowsiness, incoordination, irritation to eyes, nose and throat; flushing of neck and face.

Tert-Butyl Alcohol: Used in manufacture of flavors and perfumes; as a solvent for pharmaceuticals and paint remover. **Hazard**: Flammable solid or liquid; dangerous fire hazard; can cause headache, dizziness and drowsiness; irritation of eyes, nose and throat may occur.

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

Toluene 2 - 4 - Diisocyanate: Used in production of rigid & flexible urethane foams, elastomers & coatings. **Hazard**: Highly toxic by inhalation, skin & eye irritant, carcinogenic substance. Vapors can cause tracheobronchitis, pulmonary edema, hemorrhage & death.

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

Trichloroethane: Cleaning electronic parts and diluting paints; also in degreasers and fumigants; aerospace industries use it to flush liquid oxygen. **Hazard**: Carcinogen; mildly toxic by ingestion and inhalation.

1,2,4-Trimethylbenzene: Used in the manufacture of dyes and pharmaceuticals.

Hazard: moderately toxic by intraperitoneal route; mildly toxic by inhalation; can cause central nervous system depression, anemia and bronchitis; flammable when exposed to heat, flame or oxidizers.

Vinyl Acetate: Used in making polyvinyl resins. **Hazard**: Flammable and reactive; fire and explosive hazard; can cause irritation to eyes, nose and throat; can cause dizziness and lightheadedness; can irritate eyes and skin.

Xylene: used as solvents and in making drugs, dyes, insecticides and gasoline.

Hazard: Flammable; mildly toxic by ingestion and inhalation.

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

Appendix A: EPA EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW SECTION 313 List of Toxic Chemicals

Table II. EPCRA Section 313 Chemical List For Reporting Year 2003 (including Toxic Chemical Categories)

Individually listed EPCRA Section 313 chemicals with CAS numbers are arranged alphabetically starting on page II-3. Following the alphabetical list, the EPCRA Section 313 chemicals are arranged in CAS number order. Covered chemical categories follow.

Certain EPCRA Section 313 chemicals listed in Table II have parenthetic "qualifiers." These qualifiers indicate that these EPCRA Section 313 chemicals are subject to the section 313 reporting requirements if manufactured, processed, or otherwise used in a specific form or when a certain activity is performed. The following chemicals are reportable only if they are manufactured, processed, or otherwise used in the specific form(s) listed below:

<u>Chemical</u>	<u>CAS Number</u>	<u>Qualifier</u>
Aluminum (fume or dust)	7429-90-5	<u>Only</u> if it is a fume or dust form.
Aluminum oxide (fibrous forms)	1344-28-1	<u>Only</u> if it is a fibrous form.
Ammonia (includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10 percent of total aqueous ammonia is reportable under this listing)	7664-41-7	<u>Only</u> 10% of aqueous forms. 100% of anhydrous forms.
Asbestos (friable)	1332-21-4	<u>Only</u> if it is a friable form.
Hydrochloric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)	7647-01-0	<u>Only</u> if it is an aerosol form as defined.
Phosphorus (yellow or white)	7723-14-0	<u>Only</u> if it is a yellow or white form.
Sulfuric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)	7664-93-9	<u>Only</u> if it is an aerosol form as defined.
Vanadium (except when contained in an alloy)	7440-62-2	<u>Except</u> if it is contained in an alloy.
Zinc (fume or dust)	7440-66-6	<u>Only</u> if it is in a fume or dust form.

The qualifier for the following three chemicals is based on the chemical activity rather than the form of the chemical. These chemicals are subject to EPCRA section 313 reporting requirements only when the indicated activity is performed.

<u>Chemical/ Chemical Category</u>	<u>CAS Number</u>	<u>Qualifier</u>
Dioxin and dioxin-like compounds (manufacturing; and the processing or otherwise use of dioxin and dioxin-like compounds if the dioxin and dioxin-like compounds are present as contaminants in a chemical and if they were created during the manufacture of that chemical.)	NA	<u>Only</u> if they are manufactured at the facility; or are processed or otherwise used when present as contaminants in a chemical but only if they were created during the manufacture of that chemical.
Isopropyl alcohol (only persons who manufacture by the strong acid process are subject, no supplier notification)	67-63-0	<u>Only</u> if it is being manufactured by the strong acid process. Facilities that process or otherwise use isopropyl alcohol are <u>not</u> covered.
Saccharin (only persons who manufacture are subject, no supplier notification)	81-07-2	<u>Only</u> if it is being manufactured.

There are no supplier notification requirements for isopropyl alcohol and saccharin since the processors and users of these chemicals are not required to report. Manufacturers of these chemicals do not need to notify their customers that these are reportable EPCRA section 313 chemicals.

Table II

Note: Chemicals may be added to or deleted from the list. The Emergency Planning and Community Right-to-Know Call Center, 800 424-9346, or 703 412-9810, will provide up-to-date information on the status of these changes. See section B.3.c of the instructions for more information on the *de minimis* values listed below. There are no *de minimis* levels for PBT chemicals since the *de minimis* exemption is not available for these chemicals (an asterisk appears where a *de minimis* limit would otherwise appear in Table II). However, for purposes of the supplier notification requirement only, such limits are provided in Appendix D.

Chemical Qualifiers

This table contains the list of individual EPCRA Section 313 chemicals and categories of chemicals subject to 2003 calendar year reporting. Some of the EPCRA Section 313 chemicals listed have parenthetical qualifiers listed next to them. An EPCRA Section 313 chemical that is listed without a qualifier is subject to reporting in all forms in which it is manufactured, processed, and otherwise used.

Fume or dust. Two of the metals on the list (aluminum and zinc) contain the qualifier “fume or dust.” Fume or dust refers to dry forms of these metals but does not refer to “wet” forms such as solutions or slurries. As explained in Section B.3.a of these instructions, the term manufacture includes the generation of an EPCRA Section 313 chemical as a byproduct or impurity. In such cases, a facility should determine if, for example, it generated more than 25,000 pounds of aluminum fume or dust in the reporting year as a result of its activities. If so, the facility must report that it manufactures “aluminum (fume or dust).” Similarly, there may be certain technologies in which one of these metals is processed in the form of a fume or dust to make other EPCRA Section 313 chemicals or other products for distribution in commerce. In reporting releases, the facility would only report releases of the fume or dust.

EPA considers dusts to consist of solid particles generated by any mechanical processing of materials including crushing, grinding, rapid impact, handling, detonation, and decrepitation of organic and inorganic materials such as rock, ore, and metal. Dusts do not tend to flocculate, except under electrostatic forces.

EPA considers a fume to be an airborne dispersion consisting of small solid particles created by condensation from a gaseous state, in distinction to a gas or vapor. Fumes arise from the heating of solids such as lead. The condensation is often accompanied by a chemical reaction, such as oxidation. Fumes flocculate and sometimes coalesce.

Manufacturing qualifiers. Two of the entries in the EPCRA Section 313 chemical list contain a qualifier relating to manufacture. For isopropyl alcohol, the qualifier is “only persons

who manufacture by the strong acid process are subject, no supplier notification.” For saccharin, the qualifier is “only persons who manufacture are subject, no supplier notification.” For isopropyl alcohol, the qualifier means that only facilities manufacturing isopropyl alcohol by the strong acid process are required to report. In the case of saccharin, only manufacturers of the EPCRA Section 313 chemical are subject to the reporting requirements. A facility that processes or otherwise uses either EPCRA Section 313 chemical would not be required to report for those EPCRA Section 313 chemicals. In both cases, supplier notification does not apply because only manufacturers, not users, of the EPCRA Section 313 chemical must report.

Ammonia (includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10 percent of total aqueous ammonia is reportable under this listing). The qualifier for ammonia means that anhydrous forms of ammonia are 100% reportable and aqueous forms are limited to 10% of total aqueous ammonia. Therefore when determining threshold and releases and other waste management quantities all anhydrous ammonia is included but only 10% of total aqueous ammonia is included. Any evaporation of ammonia from aqueous ammonia solutions is considered anhydrous ammonia and should be included in threshold determinations and release and other waste management calculations.

Sulfuric acid and Hydrochloric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size). The qualifier for sulfuric acid and hydrochloric acid means that the only forms of these chemicals that are reportable are airborne forms. Aqueous solutions are not covered by this listing but any aerosols generated from aqueous solutions are covered.

Nitrate compounds (water dissociable; reportable only when in aqueous solution). The qualifier for the nitrate compounds category limits the reporting to nitrate compounds that dissociate in water, generating nitrate ion. For the purposes of threshold determinations the entire weight of the nitrate compound must be included in all calculations. For the purposes of reporting releases and other waste management quantities only the weight of the nitrate ion should be included in the calculations of these

quantities.

Phosphorus (yellow or white). The listing for phosphorus is qualified by the term "yellow or white." This means that only manufacturing, processing, or otherwise use of phosphorus in the yellow or white chemical form triggers reporting. Conversely, manufacturing, processing, or otherwise use of "black" or "red" phosphorus does not trigger reporting. Supplier notification also applies only to distribution of yellow or white phosphorus.

Asbestos (friable). The listing for asbestos is qualified by the term "friable," referring to the physical characteristic of being able to be crumbled, pulverized, or reducible to a powder with hand pressure. Only manufacturing, processing, or otherwise use of asbestos in the friable form triggers reporting. Supplier notification applies only to distribution of mixtures or other trade name products containing friable asbestos.

Aluminum Oxide (fibrous forms). The listing for aluminum oxide is qualified by the term "fibrous forms." Fibrous refers to a man-made form of aluminum oxide that is processed to produce strands or filaments which can be cut to various lengths depending on the application. Only manufacturing, processing, or otherwise use of aluminum oxide in the fibrous form triggers reporting. Supplier notification applies only to distribution of mixtures or other trade name products containing fibrous forms of aluminum oxide.

Notes for Sections A and B of following list of TRI chemicals:

"Color Index" indicated by "C.I."

* There are no *de minimis* levels for PBT chemicals, except for supplier notification purposes (see Appendix D)

a. Individually-Listed Toxic Chemicals Arranged Alphabetically

CAS Number	Chemical Name	De Minimis Limit
71751-41-2	Abamectin [Avermectin B1]	1.0
30560-19-1	Acephate (Acetylphosphoramidothioic acid O,S-dimethyl ester)	1.0
75-07-0	Acetaldehyde	0.1
60-35-5	Acetamide	0.1
75-05-8	Acetonitrile	1.0
98-86-2	Acetophenone	1.0
53-96-3	2-Acetylaminofluorene	0.1
62476-59-9	Acifluorfen, sodium salt [5-(2-Chloro-4-(trifluoromethyl)phenoxy)-2-nitrobenzoic acid, sodium salt]	1.0
107-02-8	Acrolein	1.0
79-06-1	Acrylamide	0.1
79-10-7	Acrylic acid	1.0
107-13-1	Acrylonitrile	0.1
15972-60-8	Alachlor	1.0
116-06-3	Aldicarb	1.0
309-00-2	Aldrin [1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1.alpha.,4.alpha.,4a.beta.,5.alpha.,8.alpha.,8a.beta.)-]	*
28057-48-9	d-trans-Allethrin [d-trans-Chrysanthemic acid of d-allethrine]	1.0
107-18-6	Allyl alcohol	1.0
107-11-9	Allylamine	1.0
107-05-1	Allyl chloride	1.0
7429-90-5	Aluminum (fume or dust)	1.0
20859-73-8	Aluminum phosphide	1.0
1344-28-1	Aluminum oxide (fibrous forms)	1.0
834-12-8	Ametryn (N-Ethyl-N'-(1-methylethyl)-6-(methylthio)-1,3,5,-triazine-2,4-diamine)	1.0
117-79-3	2-Aminoanthraquinone	0.1
60-09-3	4-Aminoazobenzene	0.1
92-67-1	4-Aminobiphenyl	0.1
82-28-0	1-Amino-2-methylanthraquinone	0.1

Table II

CAS Number	Chemical Name	De Minimis Limit	CAS Number	Chemical Name	De Minimis Limit
33089-61-1	Amitraz	1.0	314-40-9	Bromacil	1.0
61-82-5	Amitrole	0.1		(5-Bromo-6-methyl-3-(1-methylpropyl)-2,4(1H,3H)-pyrimidinedione)	
7664-41-7	Ammonia	1.0	53404-19-6	Bromacil, lithium salt	1.0
	(includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10 percent of total aqueous ammonia is reportable under this listing)			[2,4(1H,3H)-Pyrimidinedione,5-bromo-6-methyl-3-(1-methylpropyl), lithium salt]	
101-05-3	Anilazine	1.0	7726-95-6	Bromine	1.0
	[4,6-Dichloro-N-(2-chlorophenyl)-1,3,5-triazin-2-amine]		35691-65-7	1-Bromo-1-(bromomethyl)-1,3-propanedicarbonitrile	1.0
62-53-3	Aniline	1.0	353-59-3	Bromochlorodifluoromethane (Halon 1211)	1.0
90-04-0	o-Anisidine	0.1	75-25-2	Bromoform (Tribromomethane)	1.0
104-94-9	p-Anisidine	1.0	74-83-9	Bromomethane (Methyl bromide)	1.0
134-29-2	o-Anisidine hydrochloride	0.1	75-63-8	Bromotrifluoromethane (Halon 1301)	1.0
120-12-7	Anthracene	1.0	1689-84-5	Bromoxynil	1.0
7440-36-0	Antimony	1.0		(3,5-Dibromo-4-hydroxybenzonitrile)	
7440-38-2	Arsenic	0.1	1689-99-2	Bromoxynil octanoate	1.0
1332-21-4	Asbestos (friable)	0.1		(Octanoic acid, 2,6-dibromo-4-cyanophenylester)	
1912-24-9	Atrazine	1.0	357-57-3	Brucine	1.0
	(6-Chloro-N-ethyl-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine)		106-99-0	1,3-Butadiene	0.1
7440-39-3	Barium	1.0	141-32-2	Butyl acrylate	1.0
22781-23-3	Bendiocarb	1.0	71-36-3	n-Butyl alcohol	1.0
	[2,2-Dimethyl-1,3-benzodioxol-4-ol methylcarbamate]		78-92-2	sec-Butyl alcohol	1.0
1861-40-1	Benfluralin	1.0	75-65-0	tert-Butyl alcohol	1.0
	(N-Butyl-N-ethyl-2,6-dinitro-4-(trifluoromethyl)benzenamine)		106-88-7	1,2-Butylene oxide	0.1
17804-35-2	Benomyl	1.0	123-72-8	Butyraldehyde	1.0
98-87-3	Benzal chloride	1.0	7440-43-9	Cadmium	0.1
55-21-0	Benzamide	1.0	156-62-7	Calcium cyanamide	1.0
71-43-2	Benzene	0.1	133-06-2	Captan	1.0
92-87-5	Benzidine	0.1		[1H-Isoindole-1,3(2H)-dione, 3a,4,7,7a-tetrahydro-2-[(trichloromethyl)thio]-]	
98-07-7	Benzoic trichloride (Benzotrichloride)	0.1	63-25-2	Carbaryl [1-Naphthalenol, methylcarbamate]	1.0
191-24-2	Benzo(g,h,i)perylene	*	1563-66-2	Carbofuran	1.0
98-88-4	Benzoyl chloride	1.0	75-15-0	Carbon disulfide	1.0
94-36-0	Benzoyl peroxide	1.0	56-23-5	Carbon tetrachloride	0.1
100-44-7	Benzyl chloride	1.0	463-58-1	Carbonyl sulfide	1.0
7440-41-7	Beryllium	0.1	5234-68-4	Carboxin	1.0
82657-04-3	Bifenthrin	1.0		(5,6-Dihydro-2-methyl-N-phenyl-1,4-oxathiin-3-carboxamide)	
92-52-4	Biphenyl	1.0	120-80-9	Catechol	0.1
111-91-1	Bis(2-chloroethoxy) methane	1.0	2439-01-2	Chinomethionat	1.0
111-44-4	Bis(2-chloroethyl) ether	1.0		[6-Methyl-1,3-dithiolo[4,5-b]quinoxalin-2-one]	
542-88-1	Bis(chloromethyl) ether	0.1	133-90-4	Chloramben	1.0
108-60-1	Bis(2-chloro-1-methylethyl)ether	1.0		[Benzoic acid, 3-amino-2,5-dichloro-]	
56-35-9	Bis(tributyltin) oxide	1.0	57-74-9	Chlordane	*
10294-34-5	Boron trichloride	1.0		[4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-]	
7637-07-2	Boron trifluoride	1.0			

Table II

<i>De Minimis</i>			<i>De Minimis</i>		
CAS Number	Chemical Name	Limit	CAS Number	Chemical Name	Limit
115-28-6	Chlorendic acid	0.1	7440-47-3	Chromium	1.0
90982-32-4	Chlorimuron ethyl [Ethyl-2-[[[(4-chloro-6-methoxyprimidin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate]	1.0	4680-78-8	C.I. Acid Green 3	1.0
7782-50-5	Chlorine	1.0	6459-94-5	C.I. Acid Red 114	0.1
10049-04-4	Chlorine dioxide	1.0	569-64-2	C.I. Basic Green 4	1.0
79-11-8	Chloroacetic acid	1.0	989-38-8	C.I. Basic Red 1	1.0
532-27-4	2-Chloroacetophenone	1.0	1937-37-7	C.I. Direct Black 38	0.1
4080-31-3	1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride	1.0	2602-46-2	C.I. Direct Blue 6	0.1
106-47-8	p-Chloroaniline	0.1	28407-37-6	C.I. Direct Blue 218	1.0
108-90-7	Chlorobenzene	1.0	16071-86-6	C.I. Direct Brown 95	0.1
510-15-6	Chlorobenzilate [Benzeneacetic acid, 4-chloro-.alpha.- (4-chlorophenyl)-.alpha.-hydroxy-, ethyl ester]	1.0	2832-40-8	C.I. Disperse Yellow 3	1.0
75-68-3	1-Chloro-1,1-difluoroethane (HCFC-142b)	1.0	3761-53-3	C.I. Food Red 5	0.1
75-45-6	Chlorodifluoromethane (HCFC-22)	1.0	81-88-9	C.I. Food Red 15	1.0
75-00-3	Chloroethane (Ethyl chloride)	1.0	3118-97-6	C.I. Solvent Orange 7	1.0
67-66-3	Chloroform	0.1	97-56-3	C.I. Solvent Yellow 3	0.1
74-87-3	Chloromethane (Methyl chloride)	1.0	842-07-9	C.I. Solvent Yellow 14	1.0
107-30-2	Chloromethyl methyl ether	0.1	492-80-8	C.I. Solvent Yellow 34 (Auramine)	0.1
563-47-3	3-Chloro-2-methyl-1-propene	0.1	128-66-5	C.I. Vat Yellow 4	1.0
104-12-1	p-Chlorophenyl isocyanate	1.0	7440-48-4	Cobalt	0.1
76-06-2	Chloropicrin	1.0	7440-50-8	Copper	1.0
126-99-8	Chloroprene	0.1	8001-58-9	Creosote	0.1
542-76-7	3-Chloropropionitrile	1.0	120-71-8	p-Cresidine	0.1
63938-10-3	Chlorotetrafluoroethane	1.0	108-39-4	m-Cresol	1.0
354-25-6	1-Chloro-1,1,2,2-tetrafluoroethane (HCFC-124a)	1.0	95-48-7	o-Cresol	1.0
2837-89-0	2-Chloro-1,1,1,2-tetrafluoroethane (HCFC-124)	1.0	106-44-5	p-Cresol	1.0
1897-45-6	Chlorothalonil [1,3-Benzenedicarbonitrile, 2,4,5,6-tetrachloro-]	0.1	1319-77-3	Cresol (mixed isomers)	1.0
95-69-2	p-Chloro-o-toluidine	0.1	4170-30-3	Crotonaldehyde	1.0
75-88-7	2-Chloro-1,1,1-trifluoroethane (HCFC-133a)	1.0	98-82-8	Cumene	1.0
75-72-9	Chlorotrifluoromethane (CFC-13)	1.0	80-15-9	Cumene hydroperoxide	1.0
460-35-5	3-Chloro-1,1,1-trifluoropropane (HCFC-253fb)	1.0	135-20-6	Cupferron [Benzeneamine, N-hydroxy-N-nitroso, ammonium salt]	0.1
5598-13-0	Chlorpyrifos methyl [O,O-Dimethyl-O-(3,5,6-trichloro-2-pyridyl)phosphorothioate]	1.0	21725-46-2	Cyanazine	1.0
64902-72-3	Chlorsulfuron [2-Chloro-N-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulfonamide]	1.0	1134-23-2	Cycloate	1.0
			110-82-7	Cyclohexane	1.0
			108-93-0	Cyclohexanol	1.0
			68359-37-5	Cyfluthrin [3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropanecarboxylic acid, cyano(4-fluoro-3-phenoxyphenyl) methyl ester]	1.0
			68085-85-8	Cyhalothrin [3-(2-Chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropane-carboxylic acid cyano(3-phenoxyphenyl)methyl ester]	1.0
			94-75-7	2,4-D [Acetic acid, (2,4-dichlorophenoxy)-]	0.1
			533-74-4	Dazomet (Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione)	1.0

Table II

CAS Number	Chemical Name	De Minimis Limit	CAS Number	Chemical Name	De Minimis Limit
53404-60-7	Dazomet, sodium salt [Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione, ion(1-), sodium]	1.0	1717-00-6	1,1-Dichloro-1-fluoroethane (HCFC-141b)	1.0
94-82-6	2,4-DB	1.0	75-43-4	Dichlorofluoromethane (HCFC-21)	1.0
1929-73-3	2,4-D butoxyethyl ester	0.1	75-09-2	Dichloromethane (Methylene chloride)	0.1
94-80-4	2,4-D butyl ester	0.1	127564-92-5	Dichloropentafluoropropane	1.0
2971-38-2	2,4-D chlorocrotyl ester	0.1	13474-88-9	1,1-Dichloro-1,2,2,3,3-pentafluoropropane (HCFC-225cc)	1.0
1163-19-5	Decabromodiphenyl oxide	1.0	111512-56-2	1,1-Dichloro-1,2,3,3,3-pentafluoropropane (HCFC-225eb)	1.0
13684-56-5	Desmedipham	1.0	422-44-6	1,2-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225bb)	1.0
1928-43-4	2,4-D 2-ethylhexyl ester	0.1	431-86-7	1,2-Dichloro-1,1,3,3,3-pentafluoropropane (HCFC-225da)	1.0
53404-37-8	2,4-D 2-ethyl-4-methylpentyl ester	0.1	507-55-1	1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	1.0
2303-16-4	Diallate [Carbamothioic acid, bis(1-methylethyl)-S-(2,3-dichloro-2-propenyl) ester]	1.0	136013-79-1	1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225ea)	1.0
615-05-4	2,4-Diaminoanisole	0.1	128903-21-9	2,2-Dichloro-1,1,1,3,3-pentafluoropropane (HCFC-225aa)	1.0
39156-41-7	2,4-Diaminoanisole sulfate	0.1	422-48-0	2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC-225ba)	1.0
101-80-4	4,4'-Diaminodiphenyl ether	0.1	422-56-0	3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	1.0
95-80-7	2,4-Diaminotoluene	0.1	97-23-4	Dichlorophene [2,2'-Methylenebis(4-chlorophenol)]	1.0
25376-45-8	Diaminotoluene (mixed isomers)	0.1	120-83-2	2,4-Dichlorophenol	1.0
333-41-5	Diazinon	1.0	78-87-5	1,2-Dichloropropane	1.0
334-88-3	Diazomethane	1.0	10061-02-6	trans-1,3-Dichloropropene	0.1
132-64-9	Dibenzofuran	1.0	78-88-6	2,3-Dichloropropene	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	0.1	542-75-6	1,3-Dichloropropylene	0.1
106-93-4	1,2-Dibromoethane (Ethylene dibromide)	0.1	76-14-2	Dichlorotetrafluoroethane (CFC-114)	1.0
124-73-2	Dibromotetrafluoroethane (Halon 2402)	1.0	34077-87-7	Dichlorotrifluoroethane	1.0
84-74-2	Dibutyl phthalate	1.0	90454-18-5	Dichloro-1,1,2-trifluoroethane	1.0
1918-00-9	Dicamba (3,6-Dichloro-2-methoxybenzoic acid)	1.0	812-04-4	1,1-Dichloro-1,2,2-trifluoroethane (HCFC-123b)	1.0
99-30-9	Dichloran [2,6-Dichloro-4-nitroaniline]	1.0	354-23-4	1,2-Dichloro-1,1,2-trifluoroethane (HCFC-123a)	1.0
95-50-1	1,2-Dichlorobenzene	1.0	306-83-2	2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123)	1.0
541-73-1	1,3-Dichlorobenzene	1.0	62-73-7	Dichlorvos [Phosphoric acid, 2,2-dichloroethenyl dimethyl ester]	0.1
106-46-7	1,4-Dichlorobenzene	0.1	51338-27-3	Diclofop methyl [2-[4-(2,4-Dichlorophenoxy)phenoxy]propanoic acid, methyl ester]	1.0
25321-22-6	Dichlorobenzene (mixed isomers)	0.1	115-32-2	Dicofol [Benzenemethanol, 4-chloro-.alpha.-(4-chlorophenyl)-.alpha.-(trichloromethyl)-]	1.0
91-94-1	3,3'-Dichlorobenzidine	0.1	77-73-6	Dicyclopentadiene	1.0
612-83-9	3,3'-Dichlorobenzidine dihydrochloride	0.1			
64969-34-2	3,3'-Dichlorobenzidine sulfate	0.1			
75-27-4	Dichlorobromomethane	0.1			
764-41-0	1,4-Dichloro-2-butene	1.0			
110-57-6	trans-1,4-Dichloro-2-butene	1.0			
1649-08-7	1,2-Dichloro-1,1-difluoroethane (HCFC-132b)	1.0			
75-71-8	Dichlorodifluoromethane (CFC-12)	1.0			
107-06-2	1,2-Dichloroethane (Ethylene dichloride)	0.1			
540-59-0	1,2-Dichloroethylene	1.0			

Table II

CAS Number	Chemical Name	<i>De Minimis</i>		CAS Number	Chemical Name	<i>De Minimis</i> Limit
		Limit	Limit			
1464-53-5	Diepoxybutane	0.1		122-66-7	1,2-Diphenylhydrazine (Hydrazobenzene)	0.1
111-42-2	Diethanolamine	1.0				
38727-55-8	Diethyl ethyl	1.0		2164-07-0	Dipotassium endothal	1.0
117-81-7	Di(2-ethylhexyl) phthalate (DEHP)	0.1			[7-Oxabicyclo(2.2.1)heptane-2,3- dicarboxylic acid, dipotassium salt]	
64-67-5	Diethyl sulfate	0.1				
35367-38-5	Diflubenzuron	1.0	136-45-8		Dipropyl isocinchomeronate	1.0
101-90-6	Diglycidyl resorcinol ether	0.1	138-93-2		Disodium cyanodithioimidocarbonate	1.0
94-58-6	Dihydrosafrole	0.1		94-11-1	2,4-D isopropyl ester	0.1
55290-64-7	Dimethipin	1.0	541-53-7		2,4-Dithiobiuret	1.0
	[2,3-Dihydro-5,6-dimethyl-1,4-dithiin 1,1,4,4-tetraoxide]		330-54-1		Diuron	1.0
60-51-5	Dimethoate	1.0	2439-10-3		Dodine [Dodecylguanidine monoacetate]	1.0
119-90-4	3,3'-Dimethoxybenzidine	0.1		120-36-5	2,4-DP	0.1
20325-40-0	3,3'-Dimethoxybenzidine dihydrochloride (o-Dianisidine dihydrochloride)	0.1	1320-18-9		2,4-D propylene glycol butyl ether ester	0.1
111984-09-9	3,3'-Dimethoxybenzidine hydrochloride (o-Dianisidine hydrochloride)	0.1	2702-72-9		2,4-D sodium salt	0.1
124-40-3	Dimethylamine	1.0	106-89-8		Epichlorohydrin	0.1
2300-66-5	Dimethylamine dicamba	1.0	13194-48-4		Ethoprop [Phosphorodithioic acid O-ethyl S,S-dipropyl ester]	1.0
60-11-7	4-Dimethylaminoazobenzene	0.1		110-80-5	2-Ethoxyethanol	1.0
121-69-7	N,N-Dimethylaniline	1.0	140-88-5		Ethyl acrylate	0.1
119-93-7	3,3'-Dimethylbenzidine (o-Tolidine)	0.1	100-41-4		Ethylbenzene	0.1
612-82-8	3,3'-Dimethylbenzidine dihydrochloride (o-Tolidine dihydrochloride)	0.1	541-41-3		Ethyl chloroformate	1.0
41766-75-0	3,3'-Dimethylbenzidine dihydrofluoride (o-Tolidine dihydrofluoride)	0.1	759-94-4		Ethyl dipropylthiocarbamate (EPTC)	1.0
79-44-7	Dimethylcarbaryl chloride	0.1	74-85-1		Ethylene	1.0
2524-03-0	Dimethyl chlorothiophosphate	1.0	107-21-1		Ethylene glycol	1.0
68-12-2	N,N-Dimethylformamide	1.0	151-56-4		Ethyleneimine (Aziridine)	0.1
57-14-7	1,1-Dimethyl hydrazine	0.1	75-21-8		Ethylene oxide	0.1
105-67-9	2,4-Dimethylphenol	1.0	96-45-7		Ethylene thiourea	0.1
131-11-3	Dimethyl phthalate	1.0	75-34-3		Ethylidene dichloride	1.0
77-78-1	Dimethyl sulfate	0.1	52-85-7		Famphur	1.0
99-65-0	m-Dinitrobenzene	1.0	60168-88-9		Fenarimol	1.0
528-29-0	o-Dinitrobenzene	1.0			[.alpha.-(2-Chlorophenyl)-.alpha.-(4- chlorophenyl)-5-pyrimidinemethanol]	
100-25-4	p-Dinitrobenzene	1.0	13356-08-6		Fenbutatin oxide	1.0
88-85-7	Dinitrobutyl phenol (Dinoseb)	1.0			(Hexakis(2-methyl-2-phenylpropyl) distannoxane)	
534-52-1	4,6-Dinitro-o-cresol	1.0	66441-23-4		Fenoxaprop ethyl	1.0
51-28-5	2,4-Dinitrophenol	1.0			[2-(4-((6-Chloro-2- benzoxazolyl)oxy)phenoxy)propanoic acid, ethyl ester]	
121-14-2	2,4-Dinitrotoluene	0.1	72490-01-8		Fenoxycarb	1.0
606-20-2	2,6-Dinitrotoluene	0.1			[[2-(4-Phenoxyphenoxy)ethyl]carbamic acid ethyl ester]	
25321-14-6	Dinitrotoluene (mixed isomers)	1.0	39515-41-8		Fenpropathrin	1.0
39300-45-3	Dinocap	1.0			[2,2,3,3-Tetramethylcyclopropane carboxylic acid cyano(3-phenoxyphenyl)methyl ester]	
123-91-1	1,4-Dioxane	0.1				
957-51-7	Diphenamid	1.0				
122-39-4	Diphenylamine	1.0				

Table II

<i>De Minimis</i>			<i>De Minimis</i>		
CAS Number	Chemical Name	Limit	CAS Number	Chemical Name	Limit
55-38-9	Fenthion [O,O-Dimethyl O-[3-methyl-4-(methylthio)phenyl] ester, phosphorothioic acid]	1.0	7647-01-0	Hydrochloric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)	1.0
51630-58-1	Fenvalerate [4-Chloro-alpha-(1-methylethyl) benzeneacetic acid cyano (3-phenoxyphenyl) methyl ester]	1.0	74-90-8	Hydrogen cyanide	1.0
14484-64-1	Ferbam [Tris(dimethylcarbamodithioato- S,S')iron]	1.0	7664-39-3	Hydrogen fluoride	1.0
69806-50-4	Fluazifop butyl [2-[4-[[5-(Trifluoromethyl)-2-pyridinyl]oxy]phenoxy]propanoic acid, butyl ester]	1.0	123-31-9	Hydroquinone	1.0
2164-17-2	Fluometuron [Urea, N,N-dimethyl-N'-[3-(trifluoromethyl)phenyl]-]	1.0	35554-44-0	Imazalil [1-[2-(2,4-Dichlorophenyl)-2-(2-propenyloxy)ethyl]-1H-imidazole]	1.0
7782-41-4	Fluorine	1.0	55406-53-6	3-Iodo-2-propynyl butylcarbamate	1.0
51-21-8	Fluorouracil (5-Fluorouracil)	1.0	13463-40-6	Iron pentacarbonyl	1.0
69409-94-5	Fluvalinate [N-[2-Chloro-4-(trifluoromethyl)phenyl]-DL-valine(+)-cyano(3-phenoxyphenyl)methyl ester]	1.0	78-84-2	Isobutyraldehyde	1.0
133-07-3	Folpet	1.0	465-73-6	Isodrin	*
72178-02-0	Fomesafen [5-(2-Chloro-4-(trifluoromethyl)phenoxy)-N-methylsulfonyl-2-nitrobenzamide]	1.0	25311-71-1	Isofenphos[2-[[Ethoxyl[(1-methylethyl)amino]phosphinothioyl]oxy] benzoic acid 1-methylethyl ester]	1.0
50-00-0	Formaldehyde	0.1	67-63-0	Isopropyl alcohol (only persons who manufacture by the strong acid process are subject, no supplier notification)	1.0
64-18-6	Formic acid	1.0	80-05-7	4,4'-Isopropylidenediphenol	1.0
76-13-1	Freon 113 [Ethane, 1,1,2-trichloro-1,2,2,-trifluoro-]	1.0	120-58-1	Isosafrole	1.0
76-44-8	Heptachlor [1,4,5,6,7,8,8-Heptachloro-3a, 4,7,7a-tetrahydro-4,7-methano-1H-indene]	*	77501-63-4	Lactofen [Benzoic acid, 5-[2-Chloro-4-(trifluoromethyl)phenoxy]-2-nitro-, 2-ethoxy-1-methyl-2-oxoethyl ester]	1.0
118-74-1	Hexachlorobenzene	*	7439-92-1	Lead (when lead is contained in stainless steel, brass or bronze alloys the <i>de minimis</i> level is 0.1)	*
87-68-3	Hexachloro-1,3-butadiene	1.0	58-89-9	Lindane [Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1.alpha.,2.alpha.,3.beta.,4.alpha.,5.alpha.,6.beta.)-]	0.1
319-84-6	alpha-Hexachlorocyclohexane	0.1	330-55-2	Linuron	1.0
77-47-4	Hexachlorocyclopentadiene	1.0	554-13-2	Lithium carbonate	1.0
67-72-1	Hexachloroethane	0.1	121-75-5	Malathion	1.0
1335-87-1	Hexachloronaphthalene	1.0	108-31-6	Maleic anhydride	1.0
70-30-4	Hexachlorophene	1.0	109-77-3	Malononitrile	1.0
680-31-9	Hexamethylphosphoramide	0.1	12427-38-2	Maneb [Carbamodithioic acid, 1,2-ethanediyldis-, manganese complex]	1.0
110-54-3	n-Hexane	1.0	7439-96-5	Manganese	1.0
51235-04-2	Hexazinone	1.0	93-65-2	Mecoprop	0.1
67485-29-4	Hydramethylnon [Tetrahydro-5,5-dimethyl-2(1H)-pyrimidinone[3-[4-(trifluoromethyl)phenyl]-1-[2-[4-(trifluoromethyl)phenyl]ethenyl]-2-propenyldene]hydrazone]	1.0	149-30-4	2-Mercaptobenzothiazole (MBT)	1.0
302-01-2	Hydrazine	0.1	7439-97-6	Mercury	*
10034-93-2	Hydrazine sulfate	0.1	150-50-5	Merphos	1.0
			126-98-7	Methacrylonitrile	1.0

Table II

CAS Number	Chemical Name	De Minimis Limit	CAS Number	Chemical Name	De Minimis Limit
137-42-8	Metham sodium (Sodium methylthiocarbamate)	1.0	505-60-2	Mustard gas [Ethane, 1,1'-thiobis[2-chloro-]	0.1
67-56-1	Methanol	1.0	88671-89-0	Myclobutanil [.alpha.-Butyl-.alpha.-(4-chlorophenyl)-1H-1,2,4-triazole-1-propanenitrile]	1.0
20354-26-1	Methazole [2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione]	1.0	142-59-6	Nabam	1.0
2032-65-7	Methiocarb	1.0	300-76-5	Naled	1.0
94-74-6	Methoxone ((4-Chloro-2-methylphenoxy) acetic acid) (MCPA)	0.1	91-20-3	Naphthalene	1.0
3653-48-3	Methoxone sodium salt ((4-Chloro-2-methylphenoxy) acetate sodium salt)	0.1	134-32-7	alpha-Naphthylamine	0.1
72-43-5	Methoxychlor [Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-]]	*	91-59-8	beta-Naphthylamine	0.1
109-86-4	2-Methoxyethanol	1.0	7440-02-0	Nickel	0.1
96-33-3	Methyl acrylate	1.0	1929-82-4	Nitrapyrin (2-Chloro-6-(trichloromethyl)pyridine)	1.0
1634-04-4	Methyl tert-butyl ether	1.0	7697-37-2	Nitric acid	1.0
79-22-1	Methyl chlorocarbonate	1.0	139-13-9	Nitrilotriacetic acid	0.1
101-14-4	4,4'-Methylenebis(2-chloroaniline) (MBOCA)	0.1	100-01-6	p-Nitroaniline	1.0
101-61-1	4,4'-Methylenebis(N,N-dimethyl) benzenamine	0.1	99-59-2	5-Nitro-o-anisidine	1.0
74-95-3	Methylene bromide	1.0	98-95-3	Nitrobenzene	0.1
101-77-9	4,4'-Methylenedianiline	0.1	92-93-3	4-Nitrobiphenyl	0.1
78-93-3	Methyl ethyl ketone	1.0	1836-75-5	Nitrofen [Benzene, 2,4-dichloro-1-(4-nitrophenoxy)-]	0.1
60-34-4	Methyl hydrazine	1.0	51-75-2	Nitrogen mustard [2-Chloro-N-(2-chloroethyl)-N-methylethanamine]	0.1
74-88-4	Methyl iodide	1.0	55-63-0	Nitroglycerin	1.0
108-10-1	Methyl isobutyl ketone	1.0	88-75-5	2-Nitrophenol	1.0
624-83-9	Methyl isocyanate	1.0	100-02-7	4-Nitrophenol	1.0
556-61-6	Methyl isothiocyanate [Isothiocyanatomethane]	1.0	79-46-9	2-Nitropropane	0.1
75-86-5	2-Methylacetonitrile	1.0	924-16-3	N-Nitrosodi-n-butylamine	0.1
80-62-6	Methyl methacrylate	1.0	55-18-5	N-Nitrosodiethylamine	0.1
924-42-5	N-Methylolacrylamide	1.0	62-75-9	N-Nitrosodimethylamine	0.1
298-00-0	Methyl parathion	1.0	86-30-6	N-Nitrosodiphenylamine	1.0
109-06-8	2-Methylpyridine	1.0	156-10-5	p-Nitrosodiphenylamine	1.0
872-50-4	N-Methyl-2-pyrrolidone	1.0	621-64-7	N-Nitrosodi-n-propylamine	0.1
9006-42-2	Metiram	1.0	759-73-9	N-Nitroso-N-ethylurea	0.1
21087-64-9	Metribuzin	1.0	684-93-5	N-Nitroso-N-methylurea	0.1
7786-34-7	Mevinphos	1.0	4549-40-0	N-Nitrosomethylvinylamine	0.1
90-94-8	Michler's ketone	0.1	59-89-2	N-Nitrosomorpholine	0.1
2212-67-1	Molinate (1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester)	1.0	16543-55-8	N-Nitrosomorpholine	0.1
1313-27-5	Molybdenum trioxide	1.0	100-75-4	N-Nitrosopiperidine	0.1
76-15-3	Monochloropentafluoroethane (CFC-115)	1.0	99-55-8	5-Nitro-o-toluidine	1.0
150-68-5	Monuron	1.0	27314-13-2	Norflurazon [4-Chloro-5-(methylamino)-2-[3-(trifluoromethyl)phenyl]-3(2H)-pyridazinone]	1.0
			2234-13-1	Octachloronaphthalene	1.0
			29082-74-4	Octachlorostyrene	*
			19044-88-3	Oryzalin [4-(Dipropylamino)-3,5-dinitrobenzene sulfonamide]	1.0
			20816-12-0	Osmium tetroxide	1.0

Table II

CAS Number	Chemical Name	De Minimis Limit	CAS Number	Chemical Name	De Minimis Limit
301-12-2	Oxydemeton methyl	1.0	51-03-6	Piperonyl butoxide	1.0
19666-30-9	[S-(2-(Ethylsulfinyl)ethyl) O,O-dimethyl ester phosphorothioic acid]	1.0	29232-93-7	Pirimiphos methyl	1.0
42874-03-3	Oxydiazon	1.0	1336-36-3	[O-(2-(Diethylamino)-6-methyl-4-pyrimidinyl)-O,O-dimethylphosphorothioate]	*
10028-15-6	[3-[2,4-Dichloro-5-(1-methylethoxy)phenyl]-5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2(3H)-one]	1.0	7758-01-2	Polychlorinated biphenyls (PCBs)	0.1
123-63-7	Oxyfluorfen	1.0	128-03-0	Potassium bromate	1.0
1910-42-5	Ozone	1.0	137-41-7	Potassium dimethyldithiocarbamate	1.0
56-38-2	Paraldehyde	1.0	41198-08-7	Potassium N-methyldithiocarbamate	1.0
1114-71-2	Paraquat dichloride	1.0	7287-19-6	Profenofos	1.0
40487-42-1	Parathion	1.0	23950-58-5	[O-(4-Bromo-2-chlorophenyl)-O-ethyl-S-propyl phosphorothioate]	1.0
608-93-5	[Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl)ester]	1.0	1918-16-7	Prometryn	1.0
76-01-7	Pebulate	1.0	107-19-7	[N,N'-Bis(1-methylethyl)-6-methylthio-1,3,5-triazine-2,4-diamine]	1.0
87-86-5	Pendimethalin	*	31218-83-4	Pronamide	1.0
57-33-0	[N-(1-Ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine]	*	60207-90-1	Propachlor	1.0
79-21-0	Pentachlorobenzene	1.0	57-57-8	[2-Chloro-N-(1-methylethyl)-N-phenylacetamide]	0.1
594-42-3	Pentachloroethane	1.0	123-38-6	Propane sultone	1.0
52645-53-1	Pentachlorophenol (PCP)	0.1	114-26-1	Propanil	1.0
85-01-8	Pentobarbital sodium	1.0	115-07-1	[N-(3,4-Dichlorophenyl)propanamide]	1.0
108-95-2	Peracetic acid	1.0	75-55-8	Propargite	1.0
26002-80-2	Perchloromethyl mercaptan	1.0	75-56-9	Propargyl alcohol	1.0
95-54-5	Permethrin	1.0	110-86-1	Propetamphos	1.0
106-50-3	[3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropanecarboxylic acid, (3-phenoxyphenyl) methyl ester]	1.0	91-22-5	[3-[(Ethylamino)methoxyphosphinothioyl]oxy]-2-butenoic acid, 1-methylethyl ester]	1.0
615-28-1	Phenanthrene	1.0	106-51-4	Propiconazole	1.0
624-18-0	Phenol	1.0	82-68-8	[1-[2-(2,4-Dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]-methyl-1H-1,2,4-triazole]	0.1
90-43-7	Phenothrin	1.0	106-51-4	beta-Propiolactone	1.0
57-41-0	[2,2-Dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylic acid (3-phenoxyphenyl)methyl ester]	1.0	76578-14-8	Propionaldehyde	1.0
108-45-2	1,2-Phenylenediamine	1.0	114-26-1	Propoxur	1.0
106-50-3	1,3-Phenylenediamine	1.0	115-07-1	[Phenol, 2-(1-methylethoxy)-, methylcarbamate]	1.0
615-28-1	p-Phenylenediamine	1.0	75-55-8	Propylene (Propene)	1.0
624-18-0	1,2-Phenylenediamine dihydrochloride	1.0	75-56-9	Propyleneimine	0.1
90-43-7	1,4-Phenylenediamine dihydrochloride	1.0	110-86-1	Propylene oxide	0.1
57-41-0	2-Phenylphenol	1.0	91-22-5	Pyridine	1.0
57-41-0	Phenytol	0.1	106-51-4	Quinoline	1.0
75-44-5	Phosgene	1.0	106-51-4	Quinone	1.0
7803-51-2	Phosphine	1.0	82-68-8	Quintozene	1.0
7723-14-0	Phosphorus (yellow or white)	1.0	(Pentachloronitrobenzene)		
85-44-9	Phthalic anhydride	1.0	76578-14-8	Quizalofop-ethyl	1.0
1918-02-1	Picloram	1.0		[2-[4-[(6-Chloro-2-quinoxalinyloxy]phenoxy] propanoic acid ethyl ester]	
88-89-1	Picric acid	1.0			

Table II

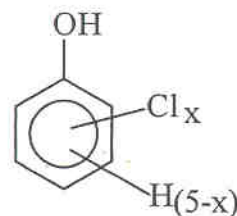
CAS Number	Chemical Name	De Minimis Limit	CAS Number	Chemical Name	De Minimis Limit
10453-86-8	Resmethrin	1.0	961-11-5	Tetrachlorvinphos	1.0
	[[5-(Phenylmethyl)-3-furanyl]methyl-2,2-dimethyl-3-(2-methyl-1-propenyl) cyclopropanecarboxylate]			[Phosphoric acid, 2-chloro-1-(2,4,5-trichlorophenyl) ethenyl dimethyl ester]	
81-07-2	Saccharin (only persons who manufacture are subject, no supplier notification)	1.0	64-75-5	Tetracycline hydrochloride	1.0
94-59-7	Safrole	0.1	7696-12-0	Tetramethrin	1.0
7782-49-2	Selenium	1.0		[2,2-Dimethyl-3-(2-methyl-1-propenyl) cyclopropanecarboxylic acid (1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)methyl ester]	
74051-80-2	Sethoxydim	1.0	7440-28-0	Thallium	1.0
	[2-[1-(Ethoxyimino)butyl]-5-[2-(ethylthio)propyl]-3-hydroxyl-2-cyclohexen-1-one]		148-79-8	Thiabendazole	1.0
7440-22-4	Silver	1.0	62-55-5	Thioacetamide	0.1
122-34-9	Simazine	1.0	28249-77-6	Thiobencarb	1.0
26628-22-8	Sodium azide	1.0		[Carbamic acid, diethylthio-, S-(p-chlorobenzyl)ester]	
1982-69-0	Sodium dicamba	1.0	139-65-1	4,4'-Thiodianiline	0.1
	[3,6-Dichloro-2-methoxybenzoic acid, sodium salt]		59669-26-0	Thiodicarb	1.0
128-04-1	Sodium dimethyldithiocarbamate	1.0	23564-06-9	Thiophanate ethyl	1.0
62-74-8	Sodium fluoroacetate	1.0		[[1,2-Phenylenebis(iminocarbonothioyl)] biscarbamic acid diethylester]	
7632-00-0	Sodium nitrite	1.0	23564-05-8	Thiophanate methyl	1.0
131-52-2	Sodium pentachlorophenate	1.0	79-19-6	Thiosemicarbazide	1.0
132-27-4	Sodium o-phenylphenoxide	0.1	62-56-6	Thiourea	0.1
100-42-5	Styrene	0.1	137-26-8	Thiram	1.0
96-09-3	Styrene oxide	0.1	1314-20-1	Thorium dioxide	1.0
[7664-93-9	Sulfuric acid	1.0	7550-45-0	Titanium tetrachloride	1.0
	(acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)		108-88-3	Toluene	1.0
2699-79-8	Sulfuryl fluoride (Vikane)	1.0	584-84-9	Toluene-2,4-diisocyanate	0.1
35400-43-2	Sulprofos	1.0	91-08-7	Toluene-2,6-diisocyanate	0.1
	[O-Ethyl O-[4-(methylthio)phenyl] phosphorodithioic acid S-propylester]		26471-62-5	Toluene diisocyanate (mixed isomers)	0.1
34014-18-1	Tebuthiuron	1.0	95-53-4	o-Toluidine	0.1
	[N-[5-(1,1-Dimethylethyl)-1,3,4-thiadiazol-2-yl]-N,N'-dimethylurea]		636-21-5	o-Toluidine hydrochloride	0.1
3383-96-8	Temephos	1.0	8001-35-2	Toxaphene	*
5902-51-2	Terbacil	1.0	43121-43-3	Triadimefon	1.0
	[5-Chloro-3-(1,1-dimethylethyl)-6-methyl-2,4(1H,3H)-pyrimidinedione]			[1-(4-Chlorophenoxy)-3,3-di-methyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone]	
79-94-7	Tetrabromobisphenol A	*	2303-17-5	Triallate	1.0
630-20-6	1,1,1,2-Tetrachloroethane	1.0	68-76-8	Triaziquone	1.0
79-34-5	1,1,2,2-Tetrachloroethane	1.0		[2,5-Cyclohexadiene-1,4-dione, 2,3,5-tris(1-aziridinyl)-]	
127-18-4	Tetrachloroethylene	0.1	101200-48-0	Tribenuron methyl	1.0
	(Perchloroethylene)			[2-[[[(4-Methoxy-6-methyl-1,3,5-triazin-2-yl)-methylamino]-carbonyl]amino]sulfonyl] benzoic acid methyl ester)	
354-11-0	1,1,1,2-Tetrachloro-2-fluoroethane	1.0	1983-10-4	Tributyltin fluoride	1.0
	(HCFC-121a)		2155-70-6	Tributyltin methacrylate	1.0
354-14-3	1,1,2,2-Tetrachloro-1-fluoroethane	1.0	78-48-8	S,S,S-Tributyltrithio-phosphate (DEF)	1.0
	(HCFC-121)				

Table II

CAS Number	Chemical Name	<i>De Minimis</i>
		Limit
52-68-6	Trichlorfon [Phosphoric acid,(2,2,2-trichloro-1-hydroxyethyl)-, dimethyl ester]	1.0
76-02-8	Trichloroacetyl chloride	1.0
120-82-1	1,2,4-Trichlorobenzene	1.0
71-55-6	1,1,1-Trichloroethane (Methyl chloroform)	1.0
79-00-5	1,1,2-Trichloroethane	1.0
79-01-6	Trichloroethylene	0.1
75-69-4	Trichlorofluoromethane (CFC-11)	1.0
95-95-4	2,4,5-Trichlorophenol	1.0
88-06-2	2,4,6-Trichlorophenol	0.1
96-18-4	1,2,3-Trichloropropane	0.1
57213-69-1	Triclopyr triethylammonium salt	1.0
121-44-8	Triethylamine	1.0
1582-09-8	Trifluralin [Benzeneamine, 2,6-dinitro-N,N-dipropyl-4-(trifluoromethyl)-]	*
26644-46-2	Triforine [N,N'-[1,4-Piperazinediylbis-(2,2,2-trichloroethylidene)]bisformamide]	1.0
95-63-6	1,2,4-Trimethylbenzene	1.0
2655-15-4	2,3,5-Trimethylphenyl methylcarbamate	1.0
639-58-7	Triphenyltin chloride	1.0
76-87-9	Triphenyltin hydroxide	1.0
126-72-7	Tris(2,3-dibromopropyl) phosphate	0.1
72-57-1	Trypan blue	0.1
51-79-6	Urethane (Ethyl carbamate)	0.1
7440-62-2	Vanadium (except when contained in an alloy)	1.0
50471-44-8	Vinclozolin [3-(3,5-Dichlorophenyl)-5-ethenyl-5-methyl-2,4-oxazolinedione]	1.0
108-05-4	Vinyl acetate	0.1
593-60-2	Vinyl bromide	0.1
75-01-4	Vinyl chloride	0.1
75-35-4	Vinylidene chloride	1.0
108-38-3	m-Xylene	1.0
95-47-6	o-Xylene	1.0
106-42-3	p-Xylene	1.0
1330-20-7	Xylene (mixed isomers)	1.0
87-62-7	2,6-Xylidine	0.1
7440-66-6	Zinc (fume or dust)	1.0
12122-67-7	Zineb [Carbamodithioic acid, 1,2-ethanediyibis-, zinc complex]	1.0

appear. However, for purposes of the supplier notification requirement only, such limits are provided in Appendix D.

- N010 Antimony Compounds (1.0)**
Includes any unique chemical substance that contains antimony as part of that chemical's infrastructure.
- N020 Arsenic Compounds (inorganic compounds: 0.1; organic compounds: 1.0)**
Includes any unique chemical substance that contains arsenic as part of that chemical's infrastructure.
- N040 Barium Compounds (1.0)**
Includes any unique chemical substance that contains barium as part of that chemical's infrastructure. This category does not include: Barium sulfate CAS Number 7727-43-7
- N050 Beryllium Compounds (0.1)**
Includes any unique chemical substance that contains beryllium as part of that chemical's infrastructure.
- N078 Cadmium Compounds (0.1)**
Includes any unique chemical substance that contains cadmium as part of that chemical's infrastructure.
- N084 Chlorophenols (0.1)**



Where $x = 1$ to 5

c. Chemical Categories

Section 313 requires reporting on the EPCRA Section 313 chemical categories listed below, in addition to the specific EPCRA Section 313 chemicals listed above.

The metal compound categories listed below, unless otherwise specified, are defined as including any unique chemical substance that contains the named metal (e.g., antimony, nickel, etc.) as part of that chemical's structure.

EPCRA Section 313 chemical categories are subject to the 1% *de minimis* concentration unless the substance involved meets the definition of an OSHA carcinogen in which case the 0.1% *de minimis* concentration applies. The *de minimis* concentration for each category is provided in parentheses. The *de minimis* exemption is not available for PBT chemicals, therefore an asterisk appears where a *de minimis* limit would otherwise

- N090 Chromium Compounds**
(except for chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the chromite ore processing residue (COPR). COPR is the solid waste remaining after aqueous extraction of oxidized chromite ore that has been combined with soda ash and kiln roasted at approximately 2,000 deg.F.)
(chromium VI compounds: 0.1; chromium III compounds: 1.0)
Includes any unique chemical substance that contains chromium as part of that chemical's infrastructure.

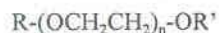
Table II

N096	Cobalt Compounds (0.1) <i>Includes any unique chemical substance that contains cobalt as part of that chemical's infrastructure.</i>	N150	Dioxin and Dioxin-Like Compounds (Manufacturing; and the processing or otherwise use of dioxin and dioxin-like compounds if the dioxin and dioxin-like compounds are present as contaminants in a chemical and if they were created during the manufacturing of that chemical.) (*) This category includes only those chemicals listed below. [Note: When completing the Form R, Part II, Section 1.4, enter the distribution percent estimates for each of the dioxin and dioxin-like compounds chemical category members in the order they are listed here (i.e., 1-17).]
N100	Copper Compounds (1.0) <i>Includes any unique chemical substance that contains copper as part of that chemical's infrastructure. This category does not include copper phthalocyanine compounds that are substituted with only hydrogen, and/or chlorine, and/or bromine.</i>		
N106	Cyanide Compounds (1.0) <i>X⁻CN⁻ where X = H⁺ or any other group where a formal dissociation can be made. For example KCN or Ca(CN)₂</i>		
N120	Diisocyanates (1.0) This category includes only those chemicals listed below.		
38661-72-2	1,3-Bis(methylisocyanate) - cyclohexane	1	67562-39-4 1,2,3,4,6,7,8-Heptachlorodibenzofuran
10347-54-3	1,4-Bis(methylisocyanate)-cyclohexane	2	55673-89-7 1,2,3,4,7,8,9-Heptachlorodibenzofuran
2556-36-7	1,4-Cyclohexane diisocyanate	3	70648-26-9 1,2,3,4,7,8-Hexachlorod-benzofuran
134190-37-7	Diethyldiisocyanatobenzene	4	57117-44-9 1,2,3,6,7,8-Hexachlorodibenzofuran
4128-73-8	4,4'-Diisocyanatodiphenyl ether	5	72918-21-9 1,2,3,7,8,9-Hexachlorodibenzofuran
75790-87-3	2,4'-Diisocyanatodiphenyl sulfide	6	60851-34-5 2,3,4,6,7,8-Hexachlorodibenzofuran
91-93-0	3,3'-Dimethoxybenzidine-4,4'-diisocyanate	7	39227-28-6 1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin
91-97-4	3,3'-Dimethyl-4,4'-diphenylene diisocyanate	8	57653-85-7 1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin
139-25-3	3,3'-Dimethyldiphenyl methane-4,4'-diisocyanate	9	19408-74-3 1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin
822-06-0	Hexamethylene-1,6-diisocyanate	10	35822-46-9 1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin
4098-71-9	Isophorone diisocyanate	11	39001-02-0 1,2,3,4,6,7,8,9-Octachlorodibenzofuran
75790-84-0	4-Methyldiphenylmethane-3,4-diisocyanate	12	3268-87-9 1,2,3,4,6,7,8,9-Octachlorodibenzo- <i>p</i> -dioxin
5124-30-1	1,1-Methylenebis(4-isocyanatocyclohexane)	13	57117-41-6 1,2,3,7,8-Pentachlorodibenzofuran
101-68-8	Methylenebis(phenylisocyanate) (MDI)	14	57117-31-4 2,3,4,7,8-Pentachlorodibenzofuran
3173-72-6	1,5-Naphthalene diisocyanate	15	40321-76-4 1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin
123-61-5	1,3-Phenylene diisocyanate	16	51207-31-9 2,3,7,8-Tetrachlorodibenzofuran
104-49-4	1,4-Phenylene diisocyanate	17	1746-01-6 2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin
9016-87-9	Polymeric diphenylmethane diisocyanate		
16938-22-0	2,2,4-Trimethylhexamethylene diisocyanate		
15646-96-5	2,4,4-Trimethylhexamethylene diisocyanate		

N171 Ethylenebisdithiocarbamic acid, salts and esters (EBDCs) (1.0)

Includes any unique chemical substance that contains an EBDC or an EBDC salt as part of that chemical's infrastructure.

N230 Certain Glycol Ethers (1.0)



where n = 1, 2, or 3

R = alkyl C7 or less; or

R = phenyl or alkyl substituted phenyl;

R' = H, or alkyl C7 or less; or

OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate.

N420 Lead Compounds (*)

Includes any unique chemical substance that contains lead as part of that chemical's infrastructure.

N450 Manganese Compounds (1.0)

Includes any unique chemical substance that contains manganese as part of that chemical's infrastructure.

N458 Mercury Compounds (*)

Includes any unique chemical substance that contains mercury as part of that chemical's infrastructure.

N495 Nickel Compounds (0.1)

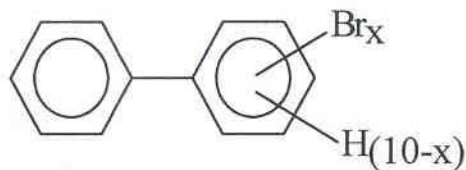
Includes any unique chemical substance that contains nickel as part of that chemical's infrastructure.

N503 Nicotine and salts (1.0)

Includes any unique chemical substance that contains nicotine or a nicotine salt as part of that chemical's infrastructure.

N511 Nitrate compounds (water dissociable; reportable only when in aqueous solution) (1.0)

N575 Polybrominated Biphenyls (PBBs) (0.1)



Where x = 1 to 10

N583 Polychlorinated alkanes (C₁₀ to C₁₃) (1.0, except for those members of the category that have an average chain length of 12 carbons and contain an average chlorine content of 60% by weight which are subject to the 0.1% *de minimis*)



where x = 10 to 13;

y = 3 to 12; and

the average chlorine content ranges from 40—70% with the limiting molecular formulas C₁₀H₁₉Cl₃ and C₁₃H₁₆Cl₁₂

N590 Polycyclic aromatic compounds (PACs) (*)

This category includes the chemicals listed below.

56-55-3	Benzo(a)anthracene
205-99-2	Benzo(b)fluoranthene
205-82-3	Benzo(j)fluoranthene
207-08-9	Benzo(k)fluoranthene
206-44-0	Benzo(j,k)fluorene
189-55-9	Benzo(r,s,t)pentaphene
218-01-9	Benzo(a)phenanthrene
50-32-8	Benzo(a)pyrene
226-36-8	Dibenz(a,h)acridine
224-42-0	Dibenz(a,j)acridine
53-70-3	Dibenzo(a,h)anthracene
194-59-2	7H-Dibenzo(c,g)carbazole
5385-75-1	Dibenzo(a,e)fluoranthene
192-65-4	Dibenzo(a,e)pyrene
189-64-0	Dibenzo(a,h)pyrene
191-30-0	Dibenzo(a,l)pyrene
57-97-6	7,12-Dimethylbenz(a)-anthracene
193-39-5	Indeno(1,2,3-cd)pyrene
56-49-5	3-Methylcholanthrene
3697-24-3	5-Methylchrysene
5522-43-0	1-Nitropyrene

N725 Selenium Compounds (1.0)

Includes any unique chemical substance that contains selenium as part of that chemical's infrastructure.

N740 Silver Compounds (1.0)

Includes any unique chemical substance that contains silver as part of that chemical's infrastructure.

N746 Strychnine and salts (1.0)

Includes any unique chemical substance that contains strychnine or a strychnine salt as part of that chemical's infrastructure.

N760 Thallium Compounds (1.0)

Includes any unique chemical substance that contains thallium as part of that chemical's infrastructure.

Table II

- N770 Vanadium Compounds (1.0)**
Includes any unique chemical substance that contains vanadium as part of that chemical's infrastructure
- N874 Warfarin and salts (1.0)**
Includes any unique chemical substance that contains warfarin or a warfarin salt as part of that chemical's infrastructure.
- N982 Zinc Compounds (1.0)**
Includes any unique chemical substance that contains zinc as part of that chemical's infrastructure.

Appendix B: Glossary

The following terms will be useful when reviewing information found in this report and when requesting other specific reports from the Minnesota EPCRA Program:

Accidental Release: The quantity released to the environment as a result of remedial actions, catastrophic events, or one-time events not associated with production processes.

Chemical Abstracts Service Registry Number (CAS #): A numeric designation assigned by the American Chemical Society's Chemical Abstracts Service which uniquely identifies a chemical.

Chemical Name: Chemicals and chemical categories as they appear on the Section 313 Toxic Chemical List.

De Minimis Concentration: A level below which a listed chemical does not need to be considered when it is present in mixtures. In general, the de minimis concentration is 1.0%, or 0.1% if the chemical meets the OSHA carcinogen standard.

Energy Recovery Off-Site: The quantity of the toxic chemical that is sent off-site for energy recovery.

Energy Recovery On-Site: The quantity of the toxic chemical that is used for energy recovery on-site.

ERC ID: Minnesota EPCRA Program Identification Number assigned to each facility in the state reporting under the "Emergency Planning and Community Right-to-Know Act" (SARA Title III). The first two digits represent the county in which the facility is located, the next three digits represent the city within that county, and the final four digits are assigned in sequential order. All toxic release reporting by a facility is tracked through its ERC ID Number.

Facility: All buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person.

Follow Year: The year following the reporting year.

Fugitive Air: Fugitive or non-point air emissions are the total releases to the air that are not released through stacks, vents, dusts, pipes, or any other confined air stream. Includes fugitive equipment leaks from: (1) valves, pump seals, flanges, compressors, sampling connections, open-ended lines, etc.; (2) evaporative losses from surface impoundments and spills; (3) releases from building ventilation systems; and (4) any other fugitive or non-point air emissions.

Manufacture: To produce, prepare, import or compound one of the chemicals on the list. For example, if a facility makes a dye for clothing by taking raw materials and reacting them, the facility is manufacturing the dye. A facility would also be covered if it was a textile manufacturer who imported a dye on the list for purposes of applying it to a fabric produced at the plant.

Methods To Identify Activity: Internal and external methods or information sources used to identify the possibility for a source reduction activity implemented at the facility.

Methods Used: Identifies the type of waste treatment, disposal, recycling, or energy recovery method used by the off-site location for the chemical being reported.

Off-Site Locations: Locations outside the boundaries of a facility to which wastes are transported for treatment, recycling, energy recovery, or disposal.

Off-Site Transfers: Transfers of the chemical in waste to off-site locations. Includes the total quantity of the chemical sent to any of the off-site waste treatment, disposal, recycling, or energy recovery facilities.

On-Site Land: Releases to the land on-site within the boundaries of the facility. Includes landfill, land treatment, surface impoundment, etc.

Otherwise Use: Any use of a toxic chemical at a facility that is not covered by the terms "manufacture" or "process" and includes use of a toxic chemical contained in a mixture or trade name product.

Process: Process, in general, includes making mixtures, repackaging, or using a chemical as a feedstock, raw material, or starting materials for making another chemical. Processing also includes incorporating a chemical into an article (e.g., using dyes to color fabric [the fabric is the article that the dye is being incorporated into]).

Production Ratio/Activity Index: The production ratio or activity index which is determined by dividing the current year's production (or activity) by the prior year's production (or activity). This ratio should reflect production or activities most closely associated with the manufacture, process, or use of the reported toxic chemical.

Public Sewage: Publicly Owned Treatment Works (POTW) responsible for wastewater treatment.

Recycled Off-Site: The quantity of the toxic chemical that is sent off-site for recycling.

Recycled On-Site: The quantity of the toxic chemical that is recycled (i.e., the quantity of the chemical exiting or resulting from the recycling operation) on-site.

Releases: Releases to the environment including air, surface water, on-site land, and off-site landfill.

2nd Year: The year two years following the reporting year.

SIC Code: Standard Industrial Classification Code used to segregate industry by economic activity.

Source Reduction Activities: Types of source reduction activities implemented in the reporting year.

Stack Air: Stack or point air emissions are the total of all releases to air that occur through stacks, vents, ducts, pipes, or other confined air streams. This includes storage tank emissions. Air releases from air pollution control equipment would generally fall in this category.

Surface Water: Discharges to receiving streams or water bodies includes the total annual amount of the chemical released from all discharge points at the facility to each receiving stream or water body. It also includes process outfalls such as pipes and open trenches, releases from on-site wastewater treatment systems, and the contribution from stormwater runoff, if applicable. This does not include discharges to a Publicly Owned Treatment Works (POTW) or other off-site wastewater treatment facilities. Discharges of listed acids may be reported as zero if the discharges have been neutralized to pH 6 or above.

Thresholds: Volumes of chemicals that trigger reporting requirements. If a facility manufactures or processes any of the listed toxic chemicals, the threshold quantity is:

- 75,000 pounds during calendar year 1987;
- 50,000 pounds in 1988; and
- 25,000 pounds in 1989 and subsequent years.

If a facility uses any listed chemical in any other way (without incorporating it into any product or producing it at the facility), the threshold quantity is:

- 10,000 pounds in calendar year 1987 and in subsequent years.

Persistent, bioaccumulative and toxic (PBT) chemicals have lower thresholds.

Total Releases and Transfers: Releases to the environment including air, surface water, and on-site land; in addition to transfers off-site to a Publicly Owned Treatment Works (POTW) and/or any off-site treatment, disposal, recycling, or energy recovery facility.

Treated Off-site: The quantity of the toxic chemical that was sent off-site for the purpose of waste treatment.

Treated On-site: The quantity of the toxic chemical entering treatment on-site.

TRI Chemical List: A list of chemicals or chemical categories on which facilities must file release reports under Section 313 of Title III. A chemical may be added to the list if it is known to cause or can reasonably be anticipated to cause significant adverse acute health effects outside a facility as a result of continuous or frequently recurring releases. In addition, chemicals may be added if they cause or may reasonably be anticipated to cause cancer or birth defects or serious or irreversible reproductive dysfunctions, neurological disorders, heritable genetic mutations or other chronic health effects. A chemical that causes or may cause a significant adverse effect on the environment may be included. The U.S. Environmental Protection Agency may delete chemicals from the list if there is not sufficient evidence to establish any of the criteria described above. The TRI Chemical List is included in Appendix A on page 82.

Year: The year in which the data was collected and reported by the facility. Section 313 data is required to be reported by July 1 of every year, covering releases and transfers for the previous reporting (calendar) year.