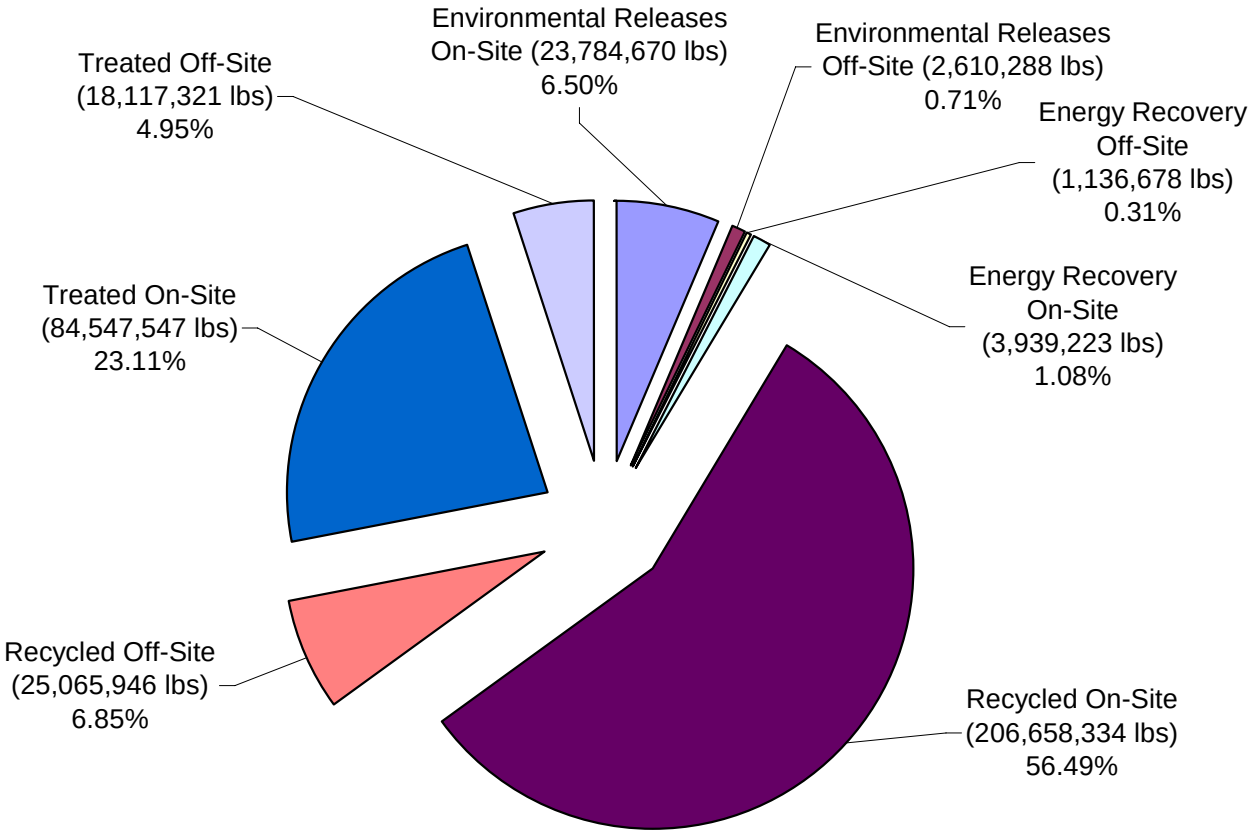
2004 Right-To-Know Chemical Information Report

State of Minnesota

A Summary of Toxic Release Inventory and Pollution Prevention Reports



Total Pounds: 365,860,007

Minnesota Public Safety HSEM Homeland Security Emergency Management

MINNESOTA EPCRA PROGRAM

Department of Public Safety
July 2006

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Preface

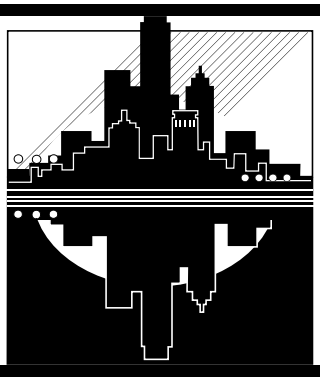
This report, covering calendar year 2004, is the annual summary of chemical management reports submitted by facilities in the State of Minnesota.

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) 201-7416 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) 201-7416
TDD: (651)296-6555

User's Guide to the *2004 Right-to-Know Chemical Information Report*

What is this report about?

This report summarizes chemical management activities for 414 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 40. A complete listing is available from the Minnesota EPCRA Program (651-201-7416 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 20-21.

For a ranking of facilities by total air releases, see pages 22-23.

For a statewide ranking of facilities reporting Dioxin and Dioxin-like Compounds, see pages 24-25.

For a statewide ranking of facilities reporting Mercury and Mercury Compounds, see pages 26-27.

For a statewide ranking of facilities reporting Lead and Lead Compounds, see pages 28-38.

For a statewide ranking of the number of facilities in each county reporting environmental releases, off-site transfers, and total chemicals managed, see page 39.

For a statewide ranking of chemical air releases in pounds, see pages 67-68.

For a statewide ranking of air releases by hazard potential, see pages 69-70.

For an overview and explanation of the “core” set of chemicals reported from 1988-2004 see pages 48-55.

For information on pollution prevention activities at facilities and a sample of information available for your community, turn to pages 56-64. A complete listing is available from the Minnesota EPCRA Program (651-201-7416).

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 414 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 651-201-7416 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 *2004 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 2004:

In 2004, 414 facilities reported releases of 26.4 million pounds to the environment, while the total amount of chemicals managed was 365 million pounds. This compares to 419 facilities reporting 31 million pounds of environmental releases in 2003 with 355 million pounds of chemicals being managed. In 2002, 425 facilities reported 30.9 million pounds of environmental releases and 316 million pounds of chemicals managed (Figures 1 & 3). For the 2004 reporting year, 128 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.

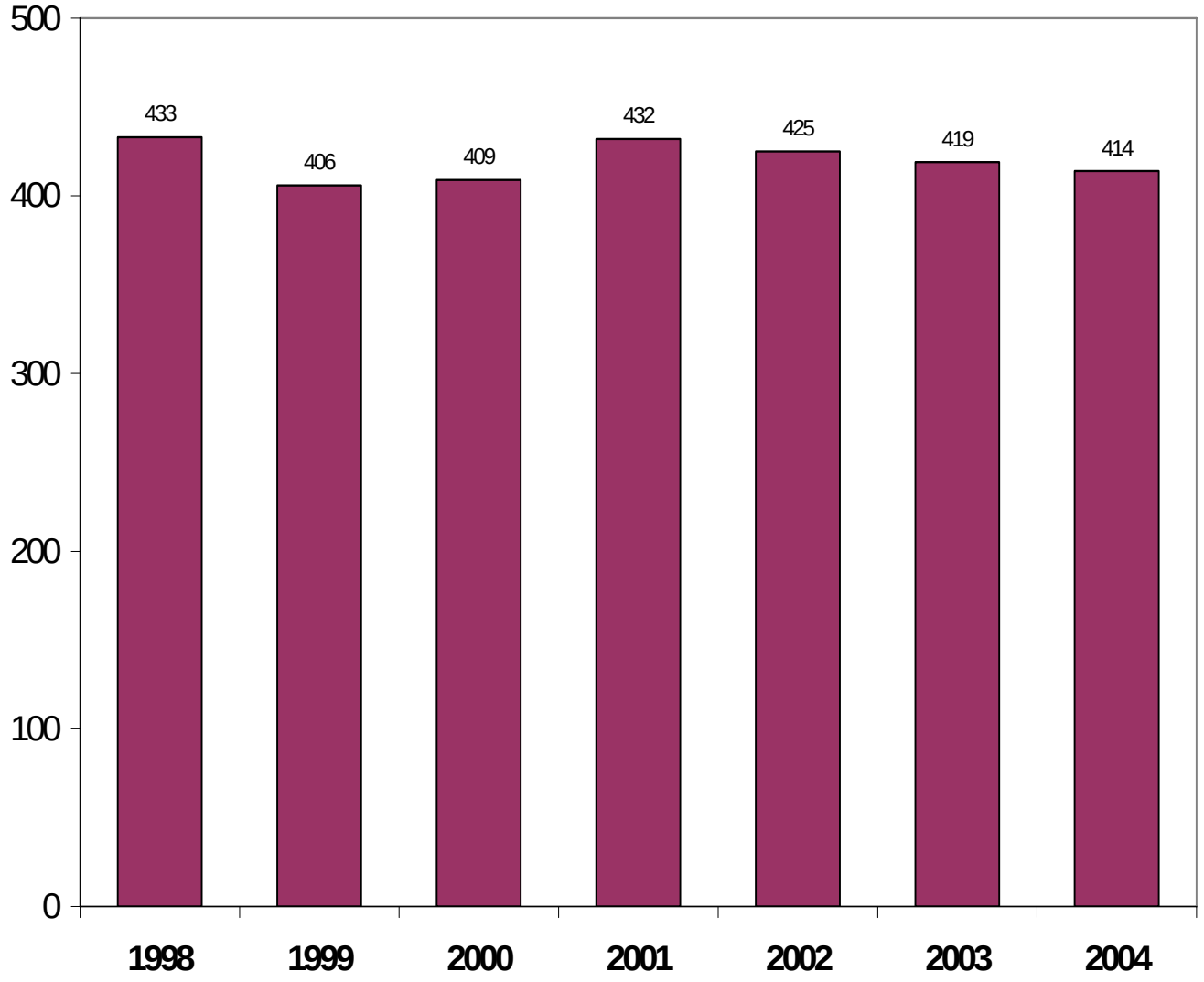
Based on the ranking in Part IV, Attachment 1, the top twenty facilities account for approximately 70% of total environmental releases. Based on the ranking in Part IV, Attachment 2, the top twenty facilities account for 90% of total chemicals managed. The chemicals most commonly *managed* were Lead Compounds, Ammonia, Methanol, Toluene, and Barium Compounds. The chemicals most commonly *released* to the environment were Barium Compounds, N-Hexane, Manganese Compounds, Ammonia and Nitrate Compounds.

376 facilities filed 1111 Pollution Prevention Progress Reports for 2004. Each Progress Report represents a pollution prevention objective for a chemical. Of the reports filed, 44% established a numerical objective and 56% established non-numeric objectives. 61% of the Progress Reports indicated the objectives have been met and 39% 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; pollution prevention was previously implemented, technical limitations of the production process, and lack of technical information on pollution prevention techniques applicable to the specific production process.

The top three chemicals in terms of total pounds of air releases were N-Hexane, Ammonia 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

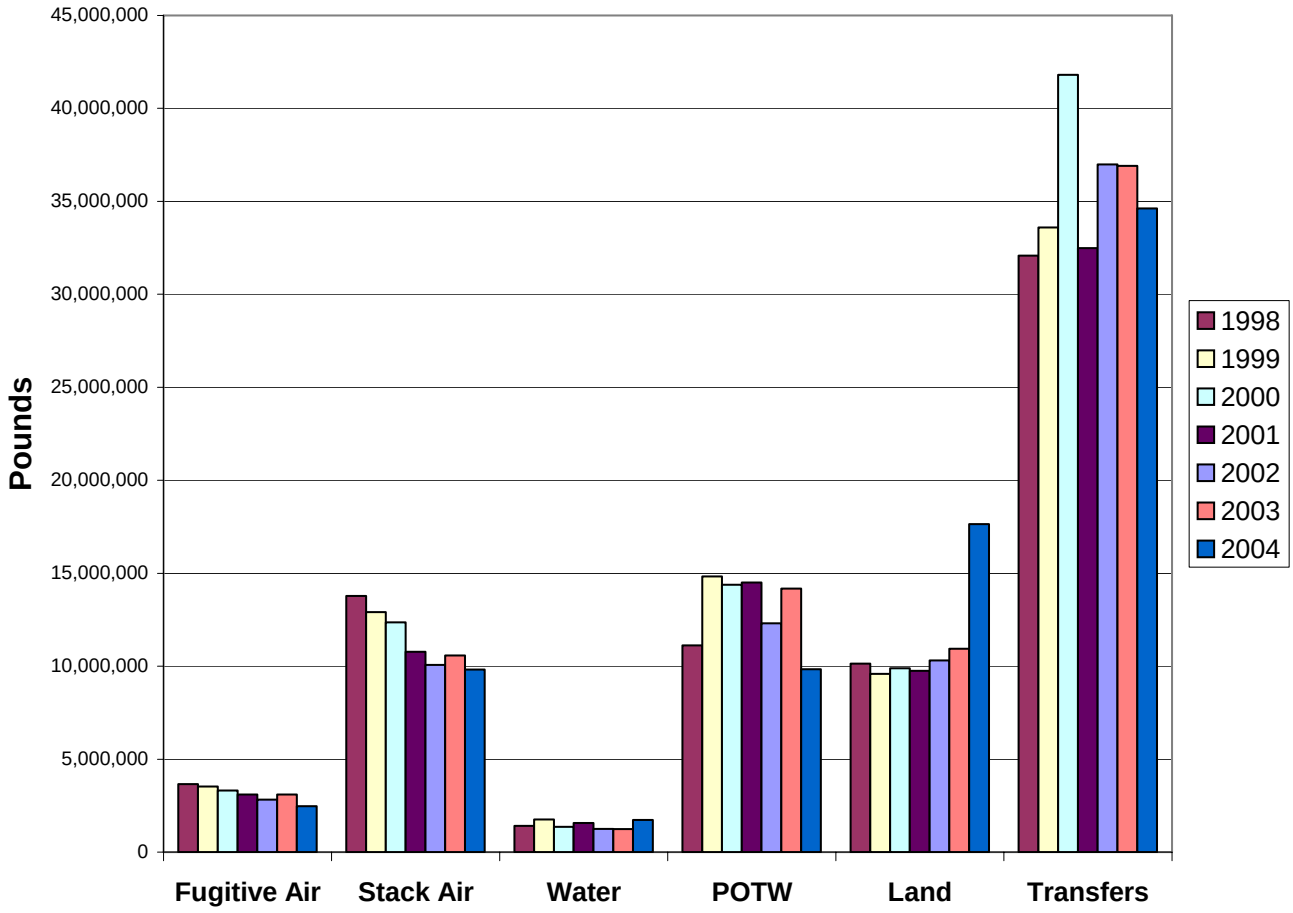
Figure 1: Number of Facilities reporting under SARA Title III, Section 313



2004 Right-To-Know Chemical Information Report

Minnesota EPCRA Program

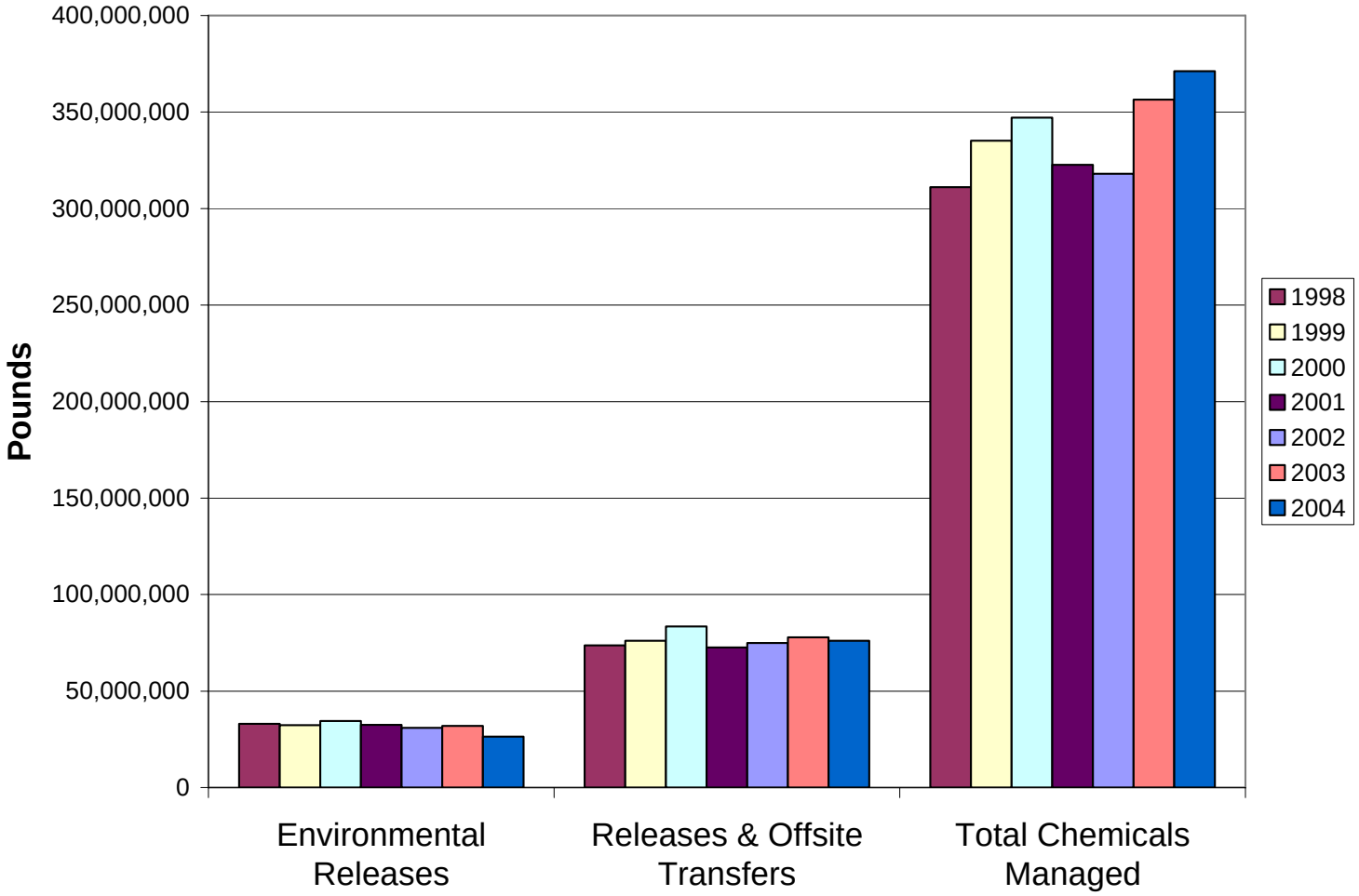
Figure 2: Total Releases and Transfers by Medium (Sections 5 & 6 of Form R)



2004 Right-To-Know Chemical Information Report

Minnesota EPCRA Program

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



2004 Right-To-Know Chemical Information Report

Minnesota EPCRA Program

Figure 4: Facilities Filing Toxic Release Inventory (TRI) Reports by County

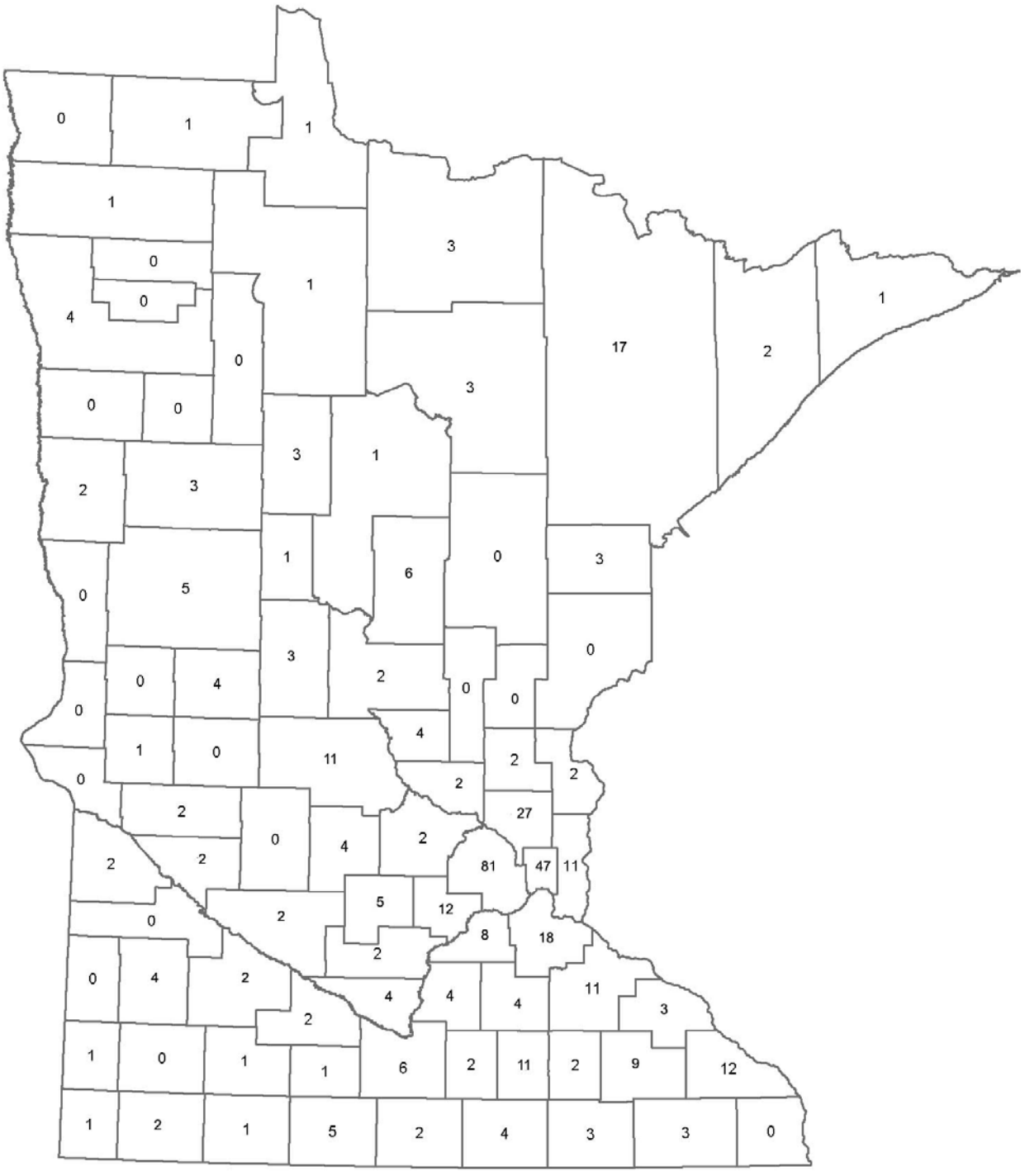
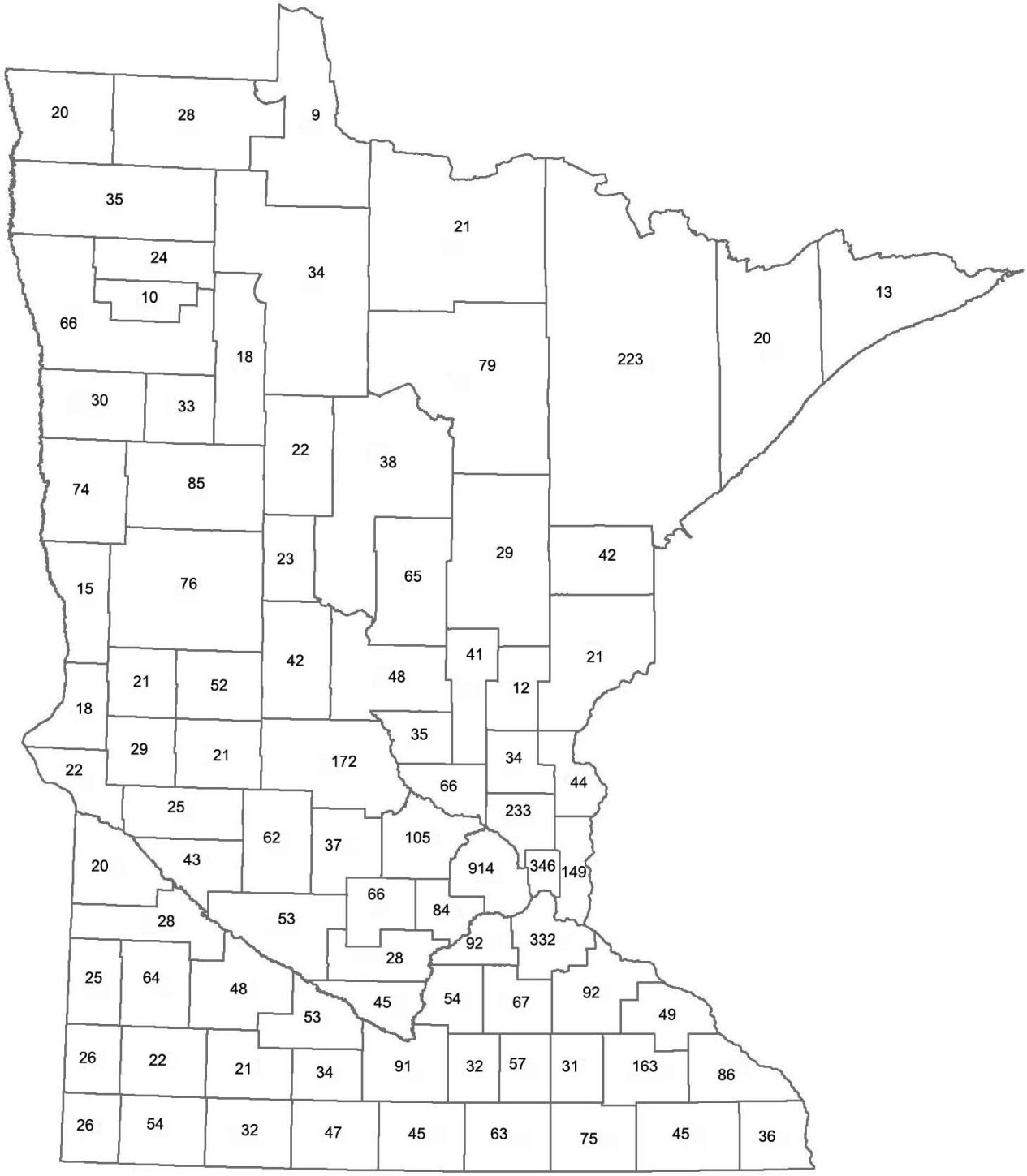


Figure 5: Facilities Filing Chemical Storage Reports (Tier II) by County



2004 Right-To-Know Chemical Information Report

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 2004. 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:

SIC Code	Industry
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 78 to 93 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:

SIC Code	Industry
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 26 million pounds of chemical releases directly to the air, water, and land and the 365 million pounds of chemicals managed in 2004 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) 201-7416.

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 63. A complete listing is available from the Minnesota EPCRA Program (651-201-7416).

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 Minnesota Pollution Control Agency at 1-800-247-0015. For more information on the progress reports, contact the Minnesota EPCRA Program at 651-201-7417.

F. Public Access to TRI Data

The Toxic Release Inventory is updated annually. TRI reports filed for 1987-2004 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 651-201-7417. 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 2004

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	**7,063,333**	**69**	0	0	0	0	721,700	0	7,785,102
MINNESOTA POWER - BOSWELL ENERGY CENTER 1210 NW 3RD ST COHASSET, MN 55721	**1,882,860**	**14**	0	0	0	0	99,000	0	1,981,875
FLINT HILLS RESOURCES, LP JUNCTION OF HWY 52 & 55 INVER GROVE HEIGHTS, MN 55077	**1,138,536**	**4,663**	0	343	226,050	47,870	34,637,653	1,655	36,056,770
3M COTTAGE GROVE CENTER 10746 INNOVATION RD COTTAGE GROVE, MN 55016	**856,183**	**214,986**	6,785	0	0	690,650	16,811,313	1,089	18,581,006
SAPPI CLOQUET LLC 2201 AVE B CLOQUET, MN 55720	**898,613**	**39,554**	598,306	0	0	0	5,965,550	9,567,278	17,069,301
XCEL ENERGY - A.S. KING GENERATING PLANT 1103 KING PLANT RD BAYPORT, MN 55003	**112,861**	**722,374**	0	0	0	0	168,000	0	1,003,235
BOISE WHITE PAPER, LLC 400 2ND ST INTL FALLS, MN 56649	**542,307**	**13,400**	370,000	0	0	0	7,919,800	0	8,845,507
CHS OILSEED PROCESSING 2020 S RIVERFRONT DR MANKATO, MN 56002-3247	**520,255**	**0**	0	0	0	20,500	0	500	541,255
MN SOYBEAN PROCESSORS 121 ZEH AVE AND HWY. 60 BREWSTER, MN 56119	**479,127**	**0**	0	0	0	0	0	0	479,127
XCEL ENERGY - RIVERSIDE PLANT 3100 MARSHALL ST NE MINNEAPOLIS, MN 55418	**70,280**	**397,332**	0	0	0	0	115,000	0	582,612

Attachment 1: Top 20 Facilities Ranked By Total Chemicals Released (Section 8.1) for Calendar Year 2004

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
ROCHESTER PUBLIC UTILITIES - SILVER LAKE 425 W SILVER LAKE DRV NE ROCHESTER, MN 55906-3675	**435,956**	**1,979**	0	0	0	0	0	0	437,935
LARSON GLASTRON BOATS, INC. 700 PAUL LARSON MEMORIAL DRV LITTLE FALLS, MN 56345-1100	**433,777**	**0**	0	0	0	0	0	0	433,777
FORD - TWIN CITIES ASSEMBLY PLANT 966 S MISSISSIPPI RIVER BLVD ST. PAUL, MN 55116	**405,943**	**7,150**	0	7,038	0	628,632	314,730	32,800	1,396,293
CROWN FOOD PACKAGING 2929 WEST BRIDGE STREET OWATONNA, MN 55060	**412,780**	**0**	0	0	0	0	0	0	412,780
CENTRAL BI-PRODUCTS 33361 COUNTY ROAD 25 REDWOOD FALLS, MN 56283	**315,250**	**0**	0	0	0	0	31,700	79,300	426,250
US MARINE/BAYLINER 918 SIOUX DRV PIPESTONE, MN 56164	**303,250**	**0**	0	0	0	0	0	0	303,250
ADM CO. 2019 3RD AVE MANKATO, MN 56001	**300,921**	**1,030**	0	0	0	10,058	0	553	312,562
GOPHER RESOURCE CORP. 3385 S HWY 149 EAGAN, MN 55121	**2,500**	**280,835**	0	0	198,380,000	0	0	0	198,663,335
TACONITE HARBOR ENERGY CENTER 8124 WEST HWY 61 SCHROEDER, MN 55613	**282,775**	**0**	0	0	0	0	0	0	282,775
3M HUTCHINSON 915 ADAMS ST SE HUTCHINSON, MN 55350-9431	**268,212**	**6,012**	0	0	3,046,900	43	3,038,500	500,470	6,860,137

Attachment 2: Top 20 Facilities Ranked By Total Chemicals Managed (Sections 8.1-8.7) for Calendar Year 2004
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	2,500	280,835	0	0	198,380,000	0	0	0	**198,663,335**
FLINT HILLS RESOURCES, LP JUNCTION OF HWY 52 & 55 INVER GROVE HEIGHTS, MN 55077	1,138,536	4,663	0	343	226,050	47,870	34,637,653	1,655	**36,056,770**
3M COTTAGE GROVE CENTER 10746 INNOVATION RD COTTAGE GROVE, MN 55016	856,183	214,986	6,785	0	0	690,650	16,811,313	1,089	**18,581,006**
SAPPI CLOQUET LLC 2201 AVE B CLOQUET, MN 55720	898,613	39,554	598,306	0	0	0	5,965,550	9,567,278	**17,069,301**
BOISE WHITE PAPER, LLC 400 2ND ST INTL FALLS, MN 56649	542,307	13,400	370,000	0	0	0	7,919,800	0	**8,845,507**
XCEL ENERGY - SHERCO PLANT 13999 INDUSTRIAL BLVD BECKER, MN 55308	7,063,333	69	0	0	0	0	721,700	0	**7,785,102**
FEDERAL CARTRIDGE COMPANY 900 EHLEN DRV ANOKA, MN 55303	66	28,092	0	0	896,400	5,619,858	3,996	592,548	**7,140,960**
3M HUTCHINSON 915 ADAMS ST SE HUTCHINSON, MN 55350-9431	268,212	6,012	0	0	3,046,900	43	3,038,500	500,470	**6,860,137**
GERDAU AMERISTEEL - ST. PAUL 1678 RED ROCK RD ST. PAUL, MN 55119	35,337	13	0	0	7,155	4,863,149	0	0	**4,905,654**
FILMTEC CORP. 7200 OHMS LANE EDINA, MN 55439	16,814	0	0	515	0	0	0	4,502,449	**4,519,778**

Attachment 2: Top 20 Facilities Ranked By Total Chemicals Managed (Sections 8.1-8.7) for Calendar Year 2004
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
MCLAUGHLIN GORMLEY KING CO. 4001 PEAVEY RD CHASKA, MN 55318	1,171	0	0	28,220	2,666,000	106,496	0	0	**2,801,887**
CHIPPEWA VALLEY ETHANOL CO. 270 20TH ST NW BENSON, MN 56215	17,579	0	2,295,332	0	0	0	230,099	0	**2,543,010**
MARATHON PETROLEUM CO. LLC 300 3RD STREET ST. PAUL PARK, MN 55071	172,867	3,388	0	2,698	454,896	2,993	1,833,260	1,045	**2,471,149**
WATER GREMLIN CO. 1610 WHITAKER AVE WHITE BEAR LAKE, MN 55110	8,475	0	0	0	94,380	1,906,045	0	0	**2,008,900**
MINNESOTA POWER - BOSWELL ENERGY CENTER 1210 NW 3RD ST COHASSET, MN 55721	1,882,860	14	0	0	0	0	99,000	0	**1,981,875**
FORD - TWIN CITIES ASSEMBLY PLANT 966 S MISSISSIPPI RIVER BLVD ST. PAUL, MN 55116	405,943	7,150	0	7,038	0	628,632	314,730	32,800	**1,396,293**
MULTEK FLEXIBLE CIRCUITS, INC. - EAST FACILITY 805 HWY 3 N NORTHFIELD, MN 55057	47,545	10,389	0	141,610	0	384,876	627,288	32,360	**1,244,068**
MELROSE DAIRY PROTEINS, LLC 1000 E KRAFT DRV MELROSE, MN 56352	0	502	16,776	0	0	0	1,025,337	6,484	**1,049,099**
XCEL ENERGY - A.S. KING GENERATING PLANT 1103 KING PLANT RD BAYPORT, MN 55003	112,861	722,374	0	0	0	0	168,000	0	**1,003,235**
AL-CORN CLEAN FUEL 797 5TH STREET CLAREMONT, MN 55924	22,402	0	0	0	0	0	943,845	0	**966,247**

Attachment 3: Top 20 Facilities Ranked by Total Air Releases for Calendar Year 2004
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
Blue Earth	CHS OILSEED PROCESSING 2020 S RIVERFRONT DR MANKATO, MN 56002-3247	52,000	468,000	520,000
Koochiching	BOISE WHITE PAPER, LLC 400 2ND ST INTL FALLS, MN 56649	35,805	480,387	516,192
Nobles	MN SOYBEAN PROCESSORS 121 ZEH AVE AND HWY. 60 BREWSTER, MN 56119	239,034	240,094	479,128
Carlton	SAPPI CLOQUET LLC 2201 AVE B CLOQUET, MN 55720	9,872	465,755	475,627
Olmsted	ROCHESTER PUBLIC UTILITIES - SILVER LAKE 425 W SILVER LAKE DRV NE ROCHESTER, MN 55906-3675	21	435,935	435,956
Morrison	LARSON GLASTRON BOATS, INC. 700 PAUL LARSON MEMORIAL DRV LITTLE FALLS, MN 56345-1100	433,777	0	433,777
Steele	CROWN FOOD PACKAGING 2929 WEST BRIDGE STREET OWATONNA, MN 55060	103,195	309,585	412,780
Ramsey	FORD - TWIN CITIES ASSEMBLY PLANT 966 S MISSISSIPPI RIVER BLVD ST. PAUL, MN 55116	19,683	386,339	406,022
Dakota	FLINT HILLS RESOURCES, LP JUNCTION OF HWY 52 & 55 INVER GROVE HEIGHTS, MN 55077	46,863	273,453	320,316
Redwood	CENTRAL BI-PRODUCTS 33361 COUNTY ROAD 25 REDWOOD FALLS, MN 56283	315,000	1,005	316,005
Pipestone	US MARINE/BAYLINER 918 SIOUX DRV PIPESTONE, MN 56164	0	303,250	303,250
Blue Earth	ADM CO. 2019 3RD AVE MANKATO, MN 56001	21,060	279,861	300,921
Martin	CHS OILSEED PROCESSING 1833 130TH ST FAIRMONT, MN 56031	27,000	243,000	270,000
McLeod	3M HUTCHINSON 915 ADAMS ST SE HUTCHINSON, MN 55350-9431	5,865	262,347	268,212
Lac Qui Parle	AG PROCESSING, INC. 800 DIAGONAL ST DAWSON, MN 56232	18,800	249,000	267,800
Ramsey	REXAM BEVERAGE CAN COMPANY 139 EVA ST ST. PAUL, MN 55107	35,566	218,771	254,337
Renville	SOUTHERN MN BEET SUGAR COOP 83550 CO RD 21 RENVILLE, MN 56284	3,228	232,648	235,876
Goodhue	ADM CO. 118 MAIN ST RED WING, MN 55066	11,427	217,125	228,552

Attachment 3: Top 20 Facilities Ranked by Total Air Releases for Calendar Year 2004
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
Washington	3M COTTAGE GROVE CENTER 10746 INNOVATION RD COTTAGE GROVE, MN 55016	23,283	200,379	223,662
Todd	CENTRAL BI-PRODUCTS 25498 US HWY 71 LONG PRAIRIE, MN 56347	198,819	750	199,569

Attachment 4: Statewide Listing of Amount of Releases, Transfers and Total Dioxin and Dioxin-like Compounds Managed for Calendar Year 2004
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 / 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
BELTRAMI County, City of SOLWAY									
NORBORD MINNESOTA --- 4409 NORTHWOOD ROAD NW									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.0786	0.0888	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1674
BENTON County, City of SARTELL									
INTERNATIONAL PAPER CO. --- 100 E SARTELL ST									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.0936	0.0000	0.0000	0.0000	0.0000	0.0348	0.0000	0.0000	0.1284
CARLTON County, City of CLOQUET									
SAPPI CLOQUET LLC --- 2201 AVE B									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	3.3360	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2570	3.5930
CLAY County, City of MOORHEAD									
AMERICAN CRYSTAL SUGAR CO. - MOORHEAD --- 2500 N 11TH ST									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.1280	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1280
COOK County, City of SCHROEDER									
TACONITE HARBOR ENERGY CENTER --- 8124 WEST HWY 61									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.1200	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1200
CROW WING County, City of DEERWOOD									
TRUS JOIST - A WEYERHAEUSER BUSINESS --- 19586 CO RD 102									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.0832	0.0070	0.0000	0.0000	0.0000	0.0170	0.0000	0.0000	0.1072
DAKOTA County, City of BURNSVILLE									
XCEL ENERGY - BLACK DOG PLANT --- 1400 E BLACK DOG RD									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.1300	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1300
DAKOTA County, City of EAGAN									
GOPHER RESOURCE CORP. --- 3385 S HWY 149									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.5000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5000
DAKOTA County, City of INVER GROVE HEIGHTS									
FLINT HILLS RESOURCES, LP --- JUNCTION OF HWY 52 & 55									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.0218	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0218
DAKOTA County, City of ROSEMOUNT									
SPECTRO ALLOYS CORP. --- 13220 DOYLE PATH									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	2.4623	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	34.2003	36.6626
HENNEPIN County, City of MINNEAPOLIS									
XCEL ENERGY - RIVERSIDE PLANT --- 3100 MARSHALL ST NE									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.1800	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1800
HUBBARD County, City of BEMIDJI									
AINSWORTH ENGINEERED (USA) LLC --- 29647 U.S. HWY. 2									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.4346	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4346
ITASCA County, City of COHASSET									
MINNESOTA POWER - BOSWELL ENERGY CENTER --- 1210 NW 3RD ST									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.5100	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5100

Attachment 4: Statewide Listing of Amount of Releases, Transfers and Total Dioxin and Dioxin-like Compounds Managed for Calendar Year 2004
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 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
ITASCA County, City of GRAND RAPIDS									
UPM BLANDIN PAPER CO. --- 115 1ST ST SW									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	11.8000	11.8000
KOOCHICHING County, City of BIG FALLS									
PAGE & HILL FOREST PRODUCTS, INC. --- 7556 CTY RD 31									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.0016	0.0000	0.0000	9.9800	0.0000	0.0000	0.0000	0.0000	9.9816
KOOCHICHING County, City of INTL FALLS									
BOISE WHITE PAPER, LLC --- 400 2ND ST									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.1300	0.0850	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2150
POLK County, City of CROOKSTON									
AMERICAN CRYSTAL SUGAR CO. - CROOKSTON --- HWY 75 S BOX 600									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.1440	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1440
POLK County, City of EAST GRAND FORKS									
AMERICAN CRYSTAL SUGAR CO. - EAST GRAND FORKS --- BUSINESS HWY 2 E									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.3080	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3080
RAMSEY County, City of NEW BRIGHTON									
BELL LUMBER & POLE CO. --- 778 1ST ST NW									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7849	12.7940	13.5789
RAMSEY County, City of ST. PAUL									
XCEL ENERGY - HIGH BRIDGE PLANT --- 501 SHEPARD RD									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.1400	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1400
RENVILLE County, City of RENVILLE									
SOUTHERN MN BEET SUGAR COOP --- 83550 CO RD 21									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.1290	0.0000	0.0000	0.0000	0.0000	0.1280	0.0000	0.0000	0.2570
SHERBURNE County, City of BECKER									
XCEL ENERGY - SHERCO PLANT --- 13999 INDUSTRIAL BLVD									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	1.8000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.8000
ST LOUIS County, City of COOK									
AINSWORTH ENGINEERED USA LLC --- 9358 HWY 53 S									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.1500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1500
ST LOUIS County, City of HIBBING									
HIBBING PUC --- 1902 SIXTH AVENUE EAST									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.1400	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1400
WASHINGTON County, City of BAYPORT									
XCEL ENERGY - A.S. KING GENERATING PLANT --- 1103 KING PLANT RD									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.1900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1900
WASHINGTON County, City of COTTAGE GROVE									
3M COTTAGE GROVE CENTER --- 10746 INNOVATION RD									
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.1420	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1420
Grand Totals:	11.3527	0.1808	0.0000	9.9800	0.0000	0.1798	0.7849	59.0513	81.5295

Attachment 5: Statewide Listing of Amount of Releases, Transfers and Total Mercury and Mercury Compounds Managed for Calendar Year 2004
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
BECKER County, City of DETROIT LAKES									
S. J. ELECTRO SYSTEMS, INC. --- 22650 COUNTY HIGHWAY 6									
MERCURY	41	0	0	0	0	0	0	0	41
BLUE EARTH County, City of MANKATO									
ADM CO. --- 2019 3RD AVE									
MERCURY COMPOUNDS	5	0	0	0	0	0	0	0	5
CARLTON County, City of CLOQUET									
SAPPI CLOQUET LLC --- 2201 AVE B									
MERCURY	13	2	0	0	0	0	0	0	15
COOK County, City of SCHROEDER									
TACONITE HARBOR ENERGY CENTER --- 8124 WEST HWY 61									
MERCURY COMPOUNDS	60	0	0	0	0	0	0	0	60
DAKOTA County, City of BURNSVILLE									
XCEL ENERGY - BLACK DOG PLANT --- 1400 E BLACK DOG RD									
MERCURY COMPOUNDS	92	0	0	0	0	0	0	0	92
DAKOTA County, City of INVER GROVE HEIGHTS									
FLINT HILLS RESOURCES, LP --- JUNCTION OF HWY 52 & 55									
MERCURY COMPOUNDS	9	0	0	0	18	17	0	0	44
HENNEPIN County, City of MINNEAPOLIS									
XCEL ENERGY - RIVERSIDE PLANT --- 3100 MARSHALL ST NE									
MERCURY COMPOUNDS	91	14	0	0	0	0	0	0	105
ITASCA County, City of COHASSET									
MINNESOTA POWER - BOSWELL ENERGY CENTER --- 1210 NW 3RD ST									
MERCURY COMPOUNDS	294	0	0	0	0	0	0	0	294
ITASCA County, City of GRAND RAPIDS									
UPM BLANDIN PAPER CO. --- 115 1ST ST SW									
MERCURY	0	2	0	0	0	0	0	0	2
MOWER County, City of AUSTIN									
AUSTIN UTILITIES - NE POWER STATION --- 3511 11TH ST NE									
MERCURY COMPOUNDS	9	0	0	0	0	0	0	0	9
OLMSTED County, City of ROCHESTER									
ROCHESTER PUBLIC UTILITIES - SILVER LAKE --- 425 W SILVER LAKE DRV NE									
MERCURY COMPOUNDS	6	9	0	0	0	0	0	0	15
OTTER TAIL County, City of FERGUS FALLS									
OTTER TAIL POWER CO. (HOOT LAKE) --- 1012 WATER PLANT ROAD									
MERCURY COMPOUNDS	32	0	0	0	0	0	0	0	33
RAMSEY County, City of ROSEVILLE									
MERCURY WASTE SOLUTIONS, INC. --- 2007 W. CO. RD. C-2									
MERCURY COMPOUNDS	0	3	0	0	0	149	0	0	152

Attachment 5: Statewide Listing of Amount of Releases, Transfers and Total Mercury and Mercury Compounds Managed for Calendar Year 2004
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
RAMSEY County, City of ST. PAUL									
GERDAU AMERISTEEL - ST. PAUL --- 1678 RED ROCK RD									
MERCURY COMPOUNDS	44	0	0	0	0	319	0	0	363
RAMSEY County, City of ST. PAUL									
WALDORF CORP. (d/b/a ROCK-TENN COMPANY) --- 2250 WABASH AVE									
MERCURY	0	2	0	0	0	0	0	0	2
RAMSEY County, City of ST. PAUL									
XCEL ENERGY - HIGH BRIDGE PLANT --- 501 SHEPARD RD									
MERCURY COMPOUNDS	80	0	0	0	0	0	0	0	80
RENVILLE County, City of RENVILLE									
SOUTHERN MN BEET SUGAR COOP --- 83550 CO RD 21									
MERCURY	13	0	0	0	0	10	0	0	23
SHERBURNE County, City of BECKER									
XCEL ENERGY - SHERCO PLANT --- 13999 INDUSTRIAL BLVD									
MERCURY COMPOUNDS	1,011	0	0	0	0	0	0	0	1,011
ST LOUIS County, City of AURORA									
MINNESOTA POWER - LASKIN ENERGY CENTER --- 5699 COLBY LAKE RD									
MERCURY COMPOUNDS	23	0	0	0	0	0	0	0	23
ST LOUIS County, City of DULUTH									
STORA ENSO DULUTH MILL --- 100 N CENTRAL AVE									
MERCURY COMPOUNDS	0	3	0	0	0	0	0	0	3
ST LOUIS County, City of HIBBING									
HIBBING PUC --- 1902 SIXTH AVENUE EAST									
MERCURY COMPOUNDS	8	13	0	0	0	0	0	0	21
WASHINGTON County, City of BAYPORT									
XCEL ENERGY - A.S. KING GENERATING PLANT --- 1103 KING PLANT RD									
MERCURY COMPOUNDS	66	0	0	0	0	0	0	0	66
WASHINGTON County, City of COTTAGE GROVE									
3M COTTAGE GROVE CENTER --- 10746 INNOVATION RD									
MERCURY COMPOUNDS	0	0	0	0	0	40	0	0	40
WASHINGTON County, City of ST. PAUL PARK									
MARATHON PETROLEUM CO. LLC --- 300 3RD STREET									
MERCURY COMPOUNDS	3	2	0	0	0	1	0	0	7
WINONA County, City of WINONA									
MILLER WASTE MILLS, INC. - RTP --- 580 E FRONT ST									
MERCURY COMPOUNDS	0	0	0	0	0	0	0	0	0
Grand Totals:	1,901	51	0	0	18	536	0	0	2,506

Attachment 6: Statewide Listing of Amount of Releases, Transfers and Total Lead and Lead Compounds Managed for Calendar Year 2004
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
ANOKA County, City of ANOKA									
ALTRON, INC. --- 6700 BUNKER LAKE BLVD. NW									
LEAD COMPOUNDS	0	0	0	0	0	440	0	0	440
ANOKA County, City of ANOKA									
BALLANTINE, INC. - DIVISION OF US TSUBAKI INC. --- 840 MCKINLEY STREET									
LEAD	0	0	0	0	0	87	0	0	87
ANOKA County, City of ANOKA									
FEDERAL CARTRIDGE COMPANY --- 900 EHLEN DRV									
LEAD COMPOUNDS	6	16,844	0	0	896,400	819,012	0	0	1,732,262
Anoka County, City of ANOKA									
FIRESTONE METAL PRODUCTS --- 1001 LUND BLVD.									
LEAD	0	8	0	0	0	0	0	0	8
ANOKA County, City of BLAINE									
PARKER MOBIL CYLINDER DIV.-BLAINE --- 1460 93RD LANE NE									
LEAD	0	1	0	0	0	1,937	0	0	1,938
ANOKA County, City of BLAINE									
SAFETY-KLEEN SYSTEMS, INC. --- 9261 ISANTI ST NE									
LEAD	0	0	0	0	0	616	0	0	616
ANOKA County, City of COON RAPIDS									
BTW INC. --- 11551 EAGLE ST. NW - SUITE 3									
LEAD	0	0	0	0	0	1,385	0	0	1,385
ANOKA County, City of COON RAPIDS									
HONEYWELL, INC. - CAP --- 8840 EVERGREEN BLVD									
LEAD COMPOUNDS	0	0	0	0	0	4,964	0	0	4,964
ANOKA County, City of COON RAPIDS									
JOHN DEERE CYLINDER DIVISION - MPLS --- 1301 115TH AVENUE NW									
LEAD	0	0	0	0	0	1,134	0	0	1,134
ANOKA County, City of FRIDLEY									
H.B. FULLER CO. --- 5220 MAIN ST NE									
LEAD	0	1	0	0	0	0	0	0	1
ANOKA County, City of FRIDLEY									
KURT MANUFACTURING DIE CAST --- 7585 HWY 65 NE									
LEAD	8	0	0	0	994	129	0	0	1,132
ANOKA County, City of FRIDLEY									
MICRO CONTROL CO. --- 7956 MAIN ST. NE									
LEAD COMPOUNDS	0	0	0	0	0	0	0	0	0
ANOKA County, City of FRIDLEY									
STYLMARK, INC. --- 6536 MAIN ST NE									
LEAD	0	0	0	0	1,080	0	0	0	1,080
BECKER County, City of DETROIT LAKES									
S. J. ELECTRO SYSTEMS, INC. --- 22650 COUNTY HIGHWAY 6									
LEAD	2	0	0	0	0	0	0	0	2
BECKER County, City of DETROIT LAKES									
TEAM INDUSTRIES INC. - DETROIT LAKES --- 1551 RICHWOOD ROAD									
LEAD	6	0	0	0	0	200	0	0	206
BELTRAMI County, City of SOLWAY									
NORBORD MINNESOTA --- 4409 NORTHWOOD ROAD NW									
LEAD	4	285	0	0	0	0	0	0	289

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BENTON County, City of SARTELL									
INTERNATIONAL PAPER CO. --- 100 E SARTELL ST									
LEAD COMPOUNDS	103	11	0	0	0	198	0	0	311
BENTON County, City of SAUK RAPIDS									
X-CEL OPTICAL CO. --- 806 S BENTON DRV									
LEAD COMPOUNDS	0	1	0	0	0	14,175	0	0	14,176
BLUE EARTH County, City of MANKATO									
ADM CO. --- 2019 3RD AVE									
LEAD COMPOUNDS	2	11	0	0	0	0	0	0	13
BLUE EARTH County, City of MANKATO									
ATLAS ALCHEM PLASTICS, INC. --- 480 INDUSTRIAL ROAD									
LEAD COMPOUNDS	0	33	0	0	200	0	0	0	233
BLUE EARTH County, City of MANKATO									
THE DOTSON COMPANY, INC. --- 200 W ROCK ST									
LEAD	0	0	0	0	0	86	0	0	86
BLUE EARTH County, City of MANKATO									
WINLAND ELECTRONICS, INC. --- 1950 EXCEL DRIVE									
LEAD	0	2	0	0	0	1,459	0	0	1,461
BROWN County, City of NEW ULM									
3M NEW ULM --- 1700 NORTH MINNESOTA STREET									
LEAD COMPOUNDS	0	285	0	0	590	5,770	0	0	6,645
CARLTON County, City of CLOQUET									
SAPPI CLOQUET LLC --- 2201 AVE B									
LEAD COMPOUNDS	4,113	142	0	0	0	0	0	0	4,255
CARLTON County, City of CLOQUET									
USG INTERIORS, INC. --- 35 ARCH ST									
LEAD	0	0	0	0	0	0	0	0	0
CARVER County, City of CHANHASSEN									
PARKER HANNIFAN CORP. --- 2860 WATER TOWER PLACE									
LEAD	0	0	0	0	0	1,776	0	0	1,776
CARVER County, City of CHANHASSEN									
QUANTUM CONTROLS INC. --- 1691 LAKE DRIVE WEST									
LEAD	0	0	0	0	0	322	0	0	322
CARVER County, City of CHANHASSEN									
ROBERTS AUTOMATIC PRODUCTS --- 880 LAKE DRV									
LEAD	0	0	0	0	0	15,282	0	0	15,282
CARVER County, City of CHANHASSEN									
ROSEMOUNT, INC. --- 8200 MARKET BLVD									
LEAD COMPOUNDS	14	20	0	0	0	1,163	0	0	1,197
CARVER County, City of CHASKA									
PEMSTAR INC. --- 4260 NOREX DRIVE									
LEAD	2	45	0	0	0	261	0	0	308
CARVER County, City of CHASKA									
PRO-TECH INTERCONNECT SOLUTIONS LLC --- 4300 PEAVEY RD									
LEAD COMPOUNDS	0	1	0	0	0	681	0	0	682
CHIPPEWA County, City of MONTEVIDEO									
MICRO DYNAMICS CORP. --- 1646 N. 9TH ST.									
LEAD	0	0	0	0	0	1,614	0	0	1,614

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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
CHIPPEWA County, City of MONTEVIDEO									
MICRO DYNAMICS CORP. - BLDG. 2 --- 1633 NORTH 9TH STREET									
LEAD	0	0	0	0	0	1,076	0	0	1,076
CLAY County, City of MOORHEAD									
AMERICAN CRYSTAL SUGAR CO. - MOORHEAD --- 2500 N 11TH ST									
LEAD COMPOUNDS	356	0	0	0	0	0	0	0	356
COOK County, City of SCHROEDER									
TACONITE HARBOR ENERGY CENTER --- 8124 WEST HWY 61									
LEAD COMPOUNDS	815	0	0	0	0	0	0	0	815
CROW WING County, City of BRAINERD									
ATEK WEST MFG. LLC --- 210 NE 10TH AVE									
LEAD	0	0	0	0	0	411	0	0	411
CROW WING County, City of BRAINERD									
KEYSTONE AUTOMOTIVE INDUSTRIES MN, INC. --- 2110 S 10TH ST									
LEAD COMPOUNDS	0	0	0	0	0	33	0	0	33
CROW WING County, City of BRAINERD									
MAC MFG. INC. --- 18092 STATE HWY. 71									
LEAD	1	0	0	0	0	6,260	0	0	6,261
CROW WING County, City of BRAINERD									
WAUSAU PAPERS --- 1801 MILL AVE NE									
LEAD COMPOUNDS	121	1	0	0	0	0	0	0	121
CROW WING County, City of DEERWOOD									
PARKER-HANNIFIN CORP. --- 325 FRONT ST									
LEAD	0	1	0	0	0	21,793	0	0	21,794
CROW WING County, City of DEERWOOD									
TRUS JOIST - A WEYERHAEUSER BUSINESS --- 19586 CO RD 102									
LEAD COMPOUNDS	6	80	0	0	0	166	0	0	252
DAKOTA County, City of APPLE VALLEY									
HANSON PIPE & PRODUCTS, INC. --- 6055 150TH ST W									
LEAD	0	0	0	0	0	0	0	0	0
DAKOTA County, City of BURNSVILLE									
ROSEMOUNT AEROSPACE INC. --- 14300 JUDICIAL RD									
LEAD	1	0	0	0	0	586	0	0	587
DAKOTA County, City of BURNSVILLE									
XCEL ENERGY - BLACK DOG PLANT --- 1400 E BLACK DOG RD									
LEAD COMPOUNDS	488	521	0	0	0	0	0	0	1,009
DAKOTA County, City of EAGAN									
GOPHER RESOURCE CORP. --- 3385 S HWY 149									
LEAD COMPOUNDS	2,454	241,800	0	0	193,600,000	0	0	0	193,844,254
DAKOTA County, City of EAGAN									
MATERIALS PROCESSING CORP. --- 2805 W SERVICE RD									
LEAD	0	0	0	0	0	1,157	0	0	1,157
DAKOTA County, City of EAGAN									
SAFETY-KLEEN SYSTEMS, INC. --- 3227 TERMINAL DRV									
LEAD	0	0	0	0	0	404	0	0	404
DAKOTA County, City of INVER GROVE HEIGHTS									
FLINT HILLS RESOURCES, LP --- JUNCTION OF HWY 52 & 55									
LEAD COMPOUNDS	41	30	0	0	685	18	0	0	775

Attachment 6: Statewide Listing of Amount of Releases,
Transfers and Total Lead and Lead Compounds Managed for Calendar Year 2004
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State of Minnesota
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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
DAKOTA County, City of ROSEMOUNT									
SPECTRO ALLOYS CORP. --- 13220 DOYLE PATH									
LEAD	21	1,200	0	0	0	0	0	0	1,221
FILLMORE County, City of RUSHFORD									
TRW AUTOMOTIVE --- HWY 43 N. - PO BOX 708									
LEAD COMPOUNDS	2	3	0	0	0	573	0	0	578
FREEBORN County, City of ALBERT LEA									
ALBERT LEA ELECTROPLATING, INC. --- 808 12TH ST BOX 89									
LEAD COMPOUNDS	0	4	0	0	0	0	0	0	4
FREEBORN County, City of ALBERT LEA									
LOU-RICH, INC. --- 505 WEST FRONT ST									
LEAD	0	0	0	0	0	1,353	0	0	1,354
GOODHUE County, City of CANNON FALLS									
AMESBURY GROUP, INC. --- 105 WASHINGTON ST									
LEAD COMPOUNDS	0	0	0	0	0	0	0	0	0
HENNEPIN County, City of BLOOMINGTON									
ADDED VALUE TECHNOLOGY LLC --- 9401 JAMES AVE S SUITE 100									
LEAD	0	2	0	0	0	2,135	0	0	2,137
HENNEPIN County, City of BLOOMINGTON									
DETECTOR ELECTRONICS CORPORATION --- 6901 WEST 110TH STREET									
LEAD	0	0	0	0	0	192	0	0	192
HENNEPIN County, City of BLOOMINGTON									
GENERAL DYNAMICS ADVANCED INFO. SYSTEMS --- 3021 AMERICAN BLVD. E									
LEAD	0	22	0	0	0	280	0	0	302
HENNEPIN County, City of BLOOMINGTON									
PRINTED CIRCUITS, INC. --- 1200 W 96TH ST									
LEAD COMPOUNDS	0	2	0	0	0	69	0	0	71
HENNEPIN County, City of BROOKLYN PARK									
MIDWEST FINISHING --- 9000 WYOMING AVE									
LEAD	0	0	0	0	0	60	0	0	60
HENNEPIN County, City of BROOKLYN PARK									
TECHNICAL PLATING, INC. --- 8760 XYLON AVE N									
LEAD	0	13	0	0	163	123	0	0	300
HENNEPIN County, City of CRYSTAL									
TRC CIRCUITS, INC. --- 3300 WINPARK DRV									
LEAD	0	1	0	0	0	578	0	0	579
HENNEPIN County, City of EDEN PRAIRIE									
MICRO DYNAMICS CORP. --- 6201 BURY DRIVE									
LEAD	0	0	0	0	0	367	0	0	367
HENNEPIN County, City of EDEN PRAIRIE									
PHILLIPS & TEMRO INDUSTRIES, INC. --- 9700 W 74TH ST									
LEAD	0	0	0	0	0	3	0	0	3
HENNEPIN County, City of EDEN PRAIRIE									
ROSEMOUNT, INC. --- 12001 TECHNOLOGY DRV									
LEAD	0	6	0	0	0	348	0	0	353
HENNEPIN County, City of GOLDEN VALLEY									
HONEYWELL --- 1985 DOUGLAS DRV N									
LEAD	1	7	0	0	0	6,982	0	0	6,990

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HENNEPIN County, City of HOPKINS									
EDCO PRODUCTS INC. --- 8700 EXCELSIOR BLVD.									
LEAD	0	0	0	0	0	126	0	0	126
HENNEPIN County, City of MAPLE GROVE									
HANSON SPANCRETE MIDWEST INC. --- 10655 CO RD 81									
LEAD	0	0	0	0	0	0	0	0	0
HENNEPIN County, City of MAPLE GROVE									
SILENT KNIGHT --- 7550 MERIDIAN CIRCLE									
LEAD COMPOUNDS	17	0	0	0	0	666	0	0	683
HENNEPIN County, City of MAPLE GROVE									
UNIVERSAL CIRCUITS, INC. --- 8860 ZACHARY LANE									
LEAD	0	5	0	0	0	4,013	0	0	4,018
HENNEPIN County, City of MINNEAPOLIS									
BOKER'S, INC. --- 3104 SNELLING AVE S									
LEAD	0	0	0	0	0	1,510	0	0	1,510
HENNEPIN County, City of MINNEAPOLIS									
G.A.F. BUILDING MATERIALS CORP. --- 50 LOWRY AVE N									
LEAD COMPOUNDS	0	1,121	0	0	0	0	0	0	1,121
HENNEPIN County, City of MINNEAPOLIS									
GAYTEE STAINED GLASS INC. --- 2744 LYNDALE AVE. SOUTH									
LEAD	0	0	0	0	0	150	0	0	150
HENNEPIN County, City of MINNEAPOLIS									
GRACO, INC. - RIVERSIDE PLANT --- 1024 SIBLEY ST NE									
LEAD	0	1	0	0	0	1,300	0	0	1,301
HENNEPIN County, City of MINNEAPOLIS									
HARD CHROME, INC. --- 2631 2ND ST NE									
LEAD COMPOUNDS	1	47	0	0	0	45	0	0	93
HENNEPIN County, City of MINNEAPOLIS									
HONEYWELL, INC. - DSES --- 2600 RIDGWAY PKWY									
LEAD COMPOUNDS	0	0	0	0	0	691	0	0	691
HENNEPIN County, City of MINNEAPOLIS									
PROSPECT FOUNDRY, INC. --- 1225 WINTER ST NE									
LEAD	15	98	0	0	0	34	0	0	147
HENNEPIN County, City of MINNEAPOLIS									
SUPERIOR PLATING, INC. --- 315 1ST AVE NE									
LEAD COMPOUNDS	0	37	0	0	0	227	0	0	264
HENNEPIN County, City of MINNEAPOLIS									
XCEL ENERGY - RIVERSIDE PLANT --- 3100 MARSHALL ST NE									
LEAD COMPOUNDS	174	3,318	0	0	0	0	0	0	3,491
HENNEPIN County, City of MINNEAPOLIS									
ZALK STEEL & SUPPLY CO. --- 466 ST. ANTHONY PKWY									
LEAD	23	0	0	0	0	0	0	0	23
HENNEPIN County, City of MINNETONKA									
HOLADAY CIRCUITS, INC. --- 11126 BREN RD W									
LEAD	9	12	0	0	0	4,081	0	0	4,101
HENNEPIN County, City of NEW HOPE									
ALPHA CERAMICS, INC. --- 5121 WINNETKA AVE									
LEAD COMPOUNDS	20	0	0	0	0	15,019	0	0	15,039

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HENNEPIN County, City of NEW HOPE									
CLARIANT --- 9101 INTERNATIONAL PKWY									
LEAD COMPOUNDS	1	193	0	0	0	0	0	0	194
HENNEPIN County, City of NEW HOPE									
INTERMET --- 5100 BOONE AVE N									
LEAD	11	54	0	0	0	448	0	0	513
HENNEPIN County, City of NEW HOPE									
OLIDYNE/PARKER --- 5520 N. HWY. 169									
LEAD	0	0	0	0	0	415	0	0	415
HENNEPIN County, City of PLYMOUTH									
BANNER ENGINEERING CORP. --- 15755 32ND AVE. N.									
LEAD COMPOUNDS	0	0	0	0	0	166	0	0	166
HENNEPIN County, City of PLYMOUTH									
BASF POLYURETHANE FOAM ENTERPRISES LLC --- 13630 WATERTOWER CIRCLE									
LEAD COMPOUNDS	0	0	0	0	0	0	0	0	0
HENNEPIN County, City of PLYMOUTH									
CIRCUIT SCIENCE, INC. --- 15831 HWY 55									
LEAD	0	0	0	0	0	996	0	0	996
HENNEPIN County, City of ROGERS									
GRACO-KOCH CENTER --- 20500 DAVID KOCH AVE									
LEAD	1	2	0	0	0	2,000	0	0	2,003
HENNEPIN County, City of ST. LOUIS PARK									
DOUGLAS CORP. - PLATING DIVISION --- 3520 XENWOOD AVE S									
LEAD COMPOUNDS	0	2	0	0	0	0	0	0	2
HENNEPIN County, City of ST. PAUL									
NORTHWEST AIRLINES, INC. --- 5101 NORTHWEST DRIVE									
LEAD	0	26	0	0	0	680	0	0	706
HUBBARD County, City of BEMIDJI									
AINSWORTH ENGINEERED (USA) LLC --- 29647 U.S. HWY. 2									
LEAD	49	0	0	0	0	0	0	0	49
HUBBARD County, City of BEMIDJI									
POTLATCH CORP. - LUMBERMILL --- 50518 COUNTY 45									
LEAD	2	0	0	0	0	0	0	0	2
HUBBARD County, City of PARK RAPIDS									
TEAM INDUSTRIES - PARK RAPIDS --- 501 INDUSTRIAL PARK ROAD									
LEAD	0	0	0	0	0	361	0	0	361
ITASCA County, City of COHASSET									
MINNESOTA POWER - BOSWELL ENERGY CENTER --- 1210 NW 3RD ST									
LEAD COMPOUNDS	11,519	11	0	0	0	0	0	0	11,531
ITASCA County, City of GRAND RAPIDS									
UPM BLANDIN PAPER CO. --- 115 1ST ST SW									
LEAD	1	603	0	0	0	0	0	0	604
LAKE County, City of TWO HARBORS									
LOUISIANA PACIFIC CORP. --- 711 25TH AVE. - IND. PARK N HWY 2									
LEAD COMPOUNDS	12	0	0	0	0	0	0	0	12
LYON County, City of COTTONWOOD									
MID CONTINENT CABINETRY, LLC --- 67 E 2ND ST N									
LEAD	0	0	0	0	0	145	0	0	145

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LYON County, City of MARSHALL									
ARCHER DANIELS MIDLAND --- 400 W ERIE ROAD									
LEAD COMPOUNDS	10	0	0	0	0	0	0	0	10
LYON County, City of MARSHALL									
HIREL SYSTEMS, LLC --- 604 W. ERIE ROAD									
LEAD	0	228	0	0	0	0	0	0	228
MARTIN County, City of FAIRMONT									
AVERY WEIGH-TRONIX LLC --- 1000 ARMSTRONG DRIVE									
LEAD	1	0	0	0	0	1,484	0	0	1,485
MCLEOD County, City of HUTCHINSON									
3M HUTCHINSON --- 915 ADAMS ST SE									
LEAD COMPOUNDS	0	2	0	0	0	1	0	0	3
MCLEOD County, City of HUTCHINSON									
HUTCHINSON MFG. INC. --- 720 HWY. 7 WEST									
LEAD	2	0	0	0	0	1,465	0	0	1,467
MCLEOD County, City of HUTCHINSON									
HUTCHINSON TECHNOLOGY, INC. --- 40 W HIGHLAND PARK DR									
LEAD	0	28	0	0	0	7	0	0	35
MOWER County, City of AUSTIN									
AUSTIN UTILITIES - NE POWER STATION --- 3511 11TH ST NE									
LEAD COMPOUNDS	113	0	0	0	0	0	0	0	113
NICOLLET County, City of NORTH MANKATO									
CARLSON CRAFT SOCIAL (TAYLOR CORP.) --- 1750 TOWER BLVD									
LEAD	24	0	0	0	0	850	0	0	874
NICOLLET County, City of NORTH MANKATO									
KATO ENGINEERING - PLANT 3 --- 2075 HOWARD DRV									
LEAD COMPOUNDS	0	0	0	0	0	495	0	0	495
NICOLLET County, City of ST. PETER									
TAYTRONICS --- 430 RITT STREET									
LEAD	2	1	0	0	0	1,586	0	0	1,589
OLMSTED County, City of ROCHESTER									
PEMSTAR, INC. --- 3535 TECHNOLOGY DR NW									
LEAD	5	0	0	0	0	1,090	0	0	1,095
OLMSTED County, City of ROCHESTER									
ROCHESTER PUBLIC UTILITIES - SILVER LAKE --- 425 W SILVER LAKE DRV NE									
LEAD COMPOUNDS	535	1,970	0	0	0	0	0	0	2,505
OTTER TAIL County, City of FERGUS FALLS									
BANNER ENGINEERING CORP. --- 1010 WEYRENS RD.									
LEAD COMPOUNDS	0	0	0	0	0	8	0	0	8
OTTER TAIL County, City of FERGUS FALLS									
OTTER TAIL POWER CO. (HOOT LAKE) --- 1012 WATER PLANT ROAD									
LEAD COMPOUNDS	427	26	0	0	0	0	0	0	453
OTTER TAIL County, City of FERGUS FALLS									
QUALITY CIRCUITS INC. --- 1102 PROGRESS DRIVE									
LEAD	0	1	0	0	0	57	0	0	59
POLK County, City of CROOKSTON									
AMERICAN CRYSTAL SUGAR CO. - CROOKSTON --- HWY 75 S BOX 600									
LEAD COMPOUNDS	403	0	0	0	0	0	0	0	403

Attachment 6: Statewide Listing of Amount of Releases,
Transfers and Total Lead and Lead Compounds Managed for Calendar Year 2004
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
POLK County, City of EAST GRAND FORKS									
AMERICAN CRYSTAL SUGAR CO. - EAST GRAND FORKS --- BUSINESS HWY 2 E									
LEAD COMPOUNDS	859	0	0	0	0	0	0	0	859
RAMSEY County, City of ARDEN HILLS									
CARDIAC PACEMAKERS INC., DBA GUIDANT --- 4100 HAMLINE AVE N									
LEAD COMPOUNDS	0	0	0	0	0	258	0	0	258
RAMSEY County, City of ARDEN HILLS									
CELESTICA, INC. --- 4300 W. ROUND LAKE RD.									
LEAD COMPOUNDS	1	83	0	0	0	26,446	0	0	26,530
RAMSEY County, City of MAPLEWOOD									
MODINE NORTH CENTRAL, INC. --- 2055 WHITE BEAR AVE									
LEAD	1	0	0	0	0	701	0	0	702
RAMSEY County, City of NEW BRIGHTON									
MICOM CORP. --- 475 OLD HWY. 8 NW									
LEAD	0	8	0	0	0	199	0	0	207
RAMSEY County, City of ROSEVILLE									
LUBRICATION TECHNOLOGIES, INC --- 2420 W CO RD C									
LEAD COMPOUNDS	0	0	0	0	0	0	0	0	0
RAMSEY County, City of ROSEVILLE									
UNICIRCUIT ROSEVILLE, INC. --- 2520 TERMINAL RD									
LEAD COMPOUNDS	0	8	0	0	0	604	0	0	612
RAMSEY County, City of ROSEVILLE									
US FILTER RECOVERY SERVICES INC. --- 2430 ROSE PLACE									
LEAD COMPOUNDS	0	869	0	0	0	2,066	0	0	2,934
RAMSEY County, City of ST. PAUL									
ACCU-TRONICS MFG. INC. --- 4255 WHITE BEAR PKWY. - SUITE 2100									
LEAD	0	0	0	0	0	409	0	0	409
RAMSEY County, City of ST. PAUL									
FORD - TWIN CITIES ASSEMBLY PLANT --- 966 S MISSISSIPPI RIVER BLVD									
LEAD	0	0	0	0	0	0	0	0	0
RAMSEY County, City of ST. PAUL									
GERDAU AMERISTEEL - ST. PAUL --- 1678 RED ROCK RD									
LEAD COMPOUNDS	2,086	8	0	0	129	304,758	0	0	306,981
RAMSEY County, City of ST. PAUL									
MOLEX PRINTED CIRCUIT PRODUCTS, INC. --- 155 EATON ST									
LEAD	5	0	0	0	0	8,395	0	0	8,400
RAMSEY County, City of ST. PAUL									
REXAM BEVERAGE CAN COMPANY --- 139 EVA ST									
LEAD	0	17	0	0	0	0	0	0	17
RAMSEY County, City of ST. PAUL									
VERSA IRON & MACHINE --- 867 FOREST ST									
LEAD	184	6	0	0	0	14	0	0	204
RAMSEY County, City of ST. PAUL									
WALDORF CORP. (d/b/a ROCK-TENN COMPANY) --- 2250 WABASH AVE									
LEAD	0	324	0	0	0	0	0	0	324
RAMSEY County, City of ST. PAUL									
XCEL ENERGY - HIGH BRIDGE PLANT --- 501 SHEPARD RD									
LEAD COMPOUNDS	542	318	0	0	0	0	0	0	861

Attachment 6: Statewide Listing of Amount of Releases, Transfers and Total Lead and Lead Compounds Managed for Calendar Year 2004
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
RAMSEY County, City of VADNAIS HEIGHTS									
ELECTRONIC INDUSTRIES HOLDING, INC. --- 400 COMMERCE COURT									
LEAD COMPOUNDS	0	0	0	0	0	238	0	0	238
RAMSEY County, City of WHITE BEAR LAKE									
TRANE --- 4833 WHITE BEAR PKWY.									
LEAD COMPOUNDS	0	0	0	0	0	2,247	0	0	2,247
RAMSEY County, City of WHITE BEAR LAKE									
WATER GREMLIN CO. --- 1610 WHITAKER AVE									
LEAD COMPOUNDS	1	0	0	0	0	1,898,671	0	0	1,898,672
REDWOOD County, City of REDWOOD FALLS									
ARTESYN TECHNOLOGIES, INC. --- 1425 E BRIDGE ST									
LEAD	0	0	0	0	0	700	0	0	700
RENVILLE County, City of RENVILLE									
SOUTHERN MN BEET SUGAR COOP --- 83550 CO RD 21									
LEAD	77	0	0	0	0	1,058	0	0	1,135
RICE County, City of NORTHFIELD									
MULTEK FLEXIBLE CIRCUITS, INC. - EAST FACILITY --- 805 HWY 3 N									
LEAD COMPOUNDS	1	414	0	0	0	2,436	0	0	2,851
SCOTT County, City of NEW PRAGUE									
CHART, INC. - NEW PRAGUE FACILITY --- 407 7TH ST NW									
LEAD	0	0	0	0	0	0	0	0	0
SHERBURNE County, City of BECKER									
XCEL ENERGY - SHERCO PLANT --- 13999 INDUSTRIAL BLVD									
LEAD COMPOUNDS	63,316	1	0	0	0	0	0	0	63,316
ST LOUIS County, City of AURORA									
MINNESOTA POWER - LASKIN ENERGY CENTER --- 5699 COLBY LAKE RD									
LEAD COMPOUNDS	528	0	0	0	0	0	0	0	528
ST LOUIS County, City of COOK									
AINSWORTH ENGINEERED USA LLC --- 9358 HWY 53 S									
LEAD	3	0	0	0	0	0	0	0	3
ST LOUIS County, City of DULUTH									
GEORGIA-PACIFIC CORP. --- 1220 RAILROAD STREET									
LEAD	82	0	0	0	0	0	0	0	82
ST LOUIS County, City of DULUTH									
GERDAU AMERISTEEL DULUTH --- 800 GARFIELD AVE									
LEAD COMPOUNDS	0	1	0	0	0	0	0	0	1
ST LOUIS County, City of DULUTH									
ME GLOBAL INC. --- 200 E CARTERETT ST									
LEAD COMPOUNDS	0	380	0	0	0	0	0	0	380
ST LOUIS County, City of DULUTH									
STORA ENSO DULUTH MILL --- 100 N CENTRAL AVE									
LEAD COMPOUNDS	0	2,071	0	0	0	0	0	0	2,072
ST LOUIS County, City of HIBBING									
HIBBING PUC --- 1902 SIXTH AVENUE EAST									
LEAD COMPOUNDS	77	642	0	0	0	0	0	0	719
ST LOUIS County, City of HIBBING									
L & M RADIATOR, INC. --- 1414 E 37TH ST									
LEAD	2	21	0	0	0	0	0	0	23

Attachment 6: Statewide Listing of Amount of Releases, Transfers and Total Lead and Lead Compounds Managed for Calendar Year 2004
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
ST LOUIS County, City of HIBBING									
NOBLE INDUSTRIES, LTD. --- 3430 E 13TH AVE									
LEAD	0	3	0	0	0	1,853	0	0	1,856
ST LOUIS County, City of HIBBING									
NORTHERN CASTINGS CORP. --- 555 W 25TH ST									
LEAD	13	1,166	0	0	0	15	0	0	1,194
ST LOUIS County, City of HIBBING									
REPTRON MANUFACTURING SERVICES --- 3125 14TH AVE E									
LEAD	0	12	0	0	0	6,362	0	0	6,373
STEARNS County, City of COLD SPRING									
COLD SPRING GRANITE - WEST --- 17434 GRANITE WEST ROAD									
LEAD COMPOUNDS	16	182	0	0	0	5,340	0	0	5,538
STEARNS County, City of ST. CLOUD									
GREDE - ST. CLOUD --- 5200 FOUNDRY CIRCLE									
LEAD	1	95	0	0	0	339	0	0	435
STEELE County, City of OWATONNA									
BLOUNT, INC. --- 3249 CO RD 45 SOUTH									
LEAD	0	0	0	0	0	621	0	0	622
STEELE County, City of OWATONNA									
SPX SERVICE SOLUTIONS --- 655 EISENHOWER DRV									
LEAD	0	0	0	0	0	7,934	0	0	7,934
STEELE County, City of OWATONNA									
SPX SERVICE SOLUTIONS-TOOLS AND EQUIP. --- 2300 PARK DRIVE									
LEAD	0	0	0	0	0	0	0	0	0
STEELE County, City of OWATONNA									
TRUTH HARDWARE --- 700 W BRIDGE ST									
LEAD	0	0	0	0	0	20	0	0	20
STEELE County, City of OWATONNA									
WENGER CORP. --- 555 PARK DRV									
LEAD	0	0	0	0	0	108	0	0	108
SWIFT County, City of BENSON									
CNH AMERICA LLC - BENSON PLANT --- 260 HIGHWAY 12 S.E.									
LEAD	0	5	0	0	0	1,440	0	0	1,445
WABASHA County, City of LAKE CITY									
FEDERAL-MOGUL POWERTRAIN SYSTEMS --- 520 N 8TH ST									
LEAD COMPOUNDS	132	0	0	0	0	0	0	0	132
WASECA County, City of WASECA									
EMERSON NETWORK POWER CONNECTIVITY SOLUTIONS --- 299 JOHNSON AVE SW									
LEAD	0	5	0	0	0	0	0	0	5
WASHINGTON County, City of BAYPORT									
XCEL ENERGY - A.S. KING GENERATING PLANT --- 1103 KING PLANT RD									
LEAD COMPOUNDS	123	7,374	0	0	0	0	0	0	7,498
WASHINGTON County, City of COTTAGE GROVE									
3M COTTAGE GROVE CENTER --- 10746 INNOVATION RD									
LEAD COMPOUNDS	283	23,176	0	0	0	1,195	0	0	24,654
WASHINGTON County, City of HUGO									
ADGRAPHICS --- 2300 MAIN STREET									
LEAD COMPOUNDS	0	2	0	0	0	2,838	0	0	2,840

Attachment 6: Statewide Listing of Amount of Releases, Transfers and Total Lead and Lead Compounds Managed for Calendar Year 2004
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
WASHINGTON County, City of ST. PAUL PARK									
MARATHON PETROLEUM CO. LLC --- 300 3RD STREET									
LEAD COMPOUNDS	24	711	0	0	234	101	0	0	1,069
WATONWAN County, City of ST. JAMES									
WESTIN AUTOMOTIVE PRODUCTS, INC. --- 240 S 15TH ST									
LEAD COMPOUNDS	0	0	0	0	0	147	0	0	147
WINONA County, City of LEWISTON									
RIVERSIDE ELECTRONICS LTD. --- 1 RIVERSIDE DRV									
LEAD	0	0	0	0	0	5,599	0	0	5,599
WINONA County, City of WINONA									
BADGER FOUNDRY CO. --- 1058 E MARK ST									
LEAD	69	12	0	0	6	0	0	0	87
WINONA County, City of WINONA									
BENCHMARK ELECTRONICS WINONA DIV. --- 4065 THEURER BLVD									
LEAD	0	62	0	0	0	6,459	0	0	6,521
WINONA County, City of WINONA									
MILLER WASTE MILLS, INC. - RTP --- 580 E FRONT ST									
LEAD COMPOUNDS	0	2	0	0	0	0	0	0	2
WINONA County, City of WINONA									
TRW AUTOMOTIVE --- 5752 INDUSTRIAL PARK RD									
LEAD COMPOUNDS	9	5	0	0	0	17,261	0	0	17,275
WINONA County, City of WINONA									
TRW AUTOMOTIVE - MACHINE BLDG. DIV. --- 5731 INDUSTRIAL PARK RD									
LEAD	0	0	0	0	0	54	0	0	54
WINONA County, City of WINONA									
WATLOW WINONA, INC. --- 1241 BUNDY BLVD									
LEAD COMPOUNDS	3	0	0	0	0	7,845	0	0	7,849
WINONA County, City of WINONA									
WILLET HAUSE ARCHITECTURAL GLASS --- 1685 WILKIE DRIVE									
LEAD	0	0	0	0	0	2,220	0	0	2,220
Grand Totals:	90,385	307,151	0	0	194,500,481	3,274,723	0	0	198,172,740

Attachment 7: Number of Facilities (by County) Reporting Releases and Transfers for Calendar Year 2004
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)

County	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	27	151,163	6,931,823	8,348,956
BECKER	3	506	43,202	43,706
BELTRAMI	1	143,231	285	143,231
BENTON	4	101,135	24,974	383,182
BLUE EARTH	6	826,468	92,417	919,412
BROWN	2	12,316	824,820	859,738
CARLTON	3	939,720	9,606,832	17,070,854
CARVER	12	283,209	319,423	3,525,607
CASS	1	8,743	0	8,743
CHIPPEWA	2	0	2,690	2,690
CHISAGO	2	11,059	0	57,097
CLAY	2	69,082	0	69,422
COOK	1	282,775	0	282,775
COTTONWOOD	1	8,305	0	62,202
CROW WING	6	1,539	788,648	790,075
DAKOTA	18	2,016,343	993,555	236,469,420
DODGE	2	86,883	229,500	1,260,228
DOUGLAS	4	105,933	441,996	628,102
FARIBAULT	2	16,254	0	16,254
FILLMORE	3	77,575	23,511	925,542
FREEBORN	4	44,199	125,667	243,691
GOODHUE	11	456,489	486,133	2,256,532
HENNEPIN	81	1,154,805	8,111,059	10,904,641
HUBBARD	3	199,290	42,381	276,997
ISANTI	2	55	35,687	35,734
ITASCA	3	2,046,226	21,680	2,224,187
JACKSON	1	0	0	0
KOOCHICHING	3	568,888	13,404	8,858,689
LAC QUI PARLE	2	438,492	3,587	693,748
LAKE	2	30,795	44,591	120,737
LAKE OF THE WOODS	1	1,205	5,204	29,308
LE SUEUR	4	38,458	104,514	541,035
LYON	4	192,707	4,288	196,767
MARSHALL	1	45,289	0	45,289
MARTIN	5	341,995	2,014	344,009
MCLEOD	5	275,039	591,221	7,032,695
MEEKER	4	22,507	516,793	1,014,628
MORRISON	2	443,350	0	487,968
MOWER	3	247,858	38,732	283,426
NICOLLET	4	12,164	4,321	16,484
Nobles	2	483,429	42,313	525,742
OLMSTED	9	543,095	829,627	1,644,634
OTTER TAIL	5	229,757	127,508	957,159
PIPESTONE	1	303,250	0	303,250
POLK	4	310,558	49,147	459,135
RAMSEY	47	959,034	8,528,561	10,226,396
REDWOOD	2	315,250	80,000	426,950
RENVILLE	2	250,946	63,081	327,661
RICE	4	147,486	1,276,498	2,303,451
ROCK	1	2,346	0	26,332
ROSEAU	1	15,000	3,719	18,719
SCOTT	8	78,361	585,835	1,228,919
SHERBURNE	2	7,133,953	100,071	7,955,655
SIBLEY	2	55,373	0	475,622
ST LOUIS	17	493,049	313,218	898,748
STEARNS	11	212,603	861,278	2,168,164
STEELE	11	424,866	860,838	1,301,939
STEVENS	1	24,710	0	652,892
SWIFT	2	17,660	159,113	2,702,187
TODD	3	234,420	26,037	257,247
WABASHA	3	22,429	4,130	24,870
WADENA	1	13,300	0	13,300
WASECA	2	9,895	111,447	142,981
WASHINGTON	11	2,284,896	1,739,210	22,487,930
WATONWAN	1	15	18,876	18,876
WINONA	12	119,676	661,603	816,723
WRIGHT	2	7,553	13,175	20,728
Totals:	**414**	**26,394,959**	**46,930,235**	**365,860,011**

Attachment 8: Sample Statewide Listing of Amount of Releases, Transfers, and Total Chemicals Managed for Calendar Year 2004
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 Chemicals Managed
ANOKA County, City of ANOKA -- ALTRON, INC. -- 6700 BUNKER LAKE BLVD. NW									
LEAD COMPOUNDS	0	0	0	0	0	440	0	0	440
Totals	**0**	**0**	**0**	**0**	**0**	**440**	**0**	**0**	**440**
ANOKA County, City of ANOKA -- BALLANTINE, INC. - DIVISION OF US TSUBAKI INC. -- 840 MCKINLEY STREET									
NICKEL	0	0	0	0	0	1,450	0	0	1,450
ZINC COMPOUNDS	0	0	0	0	0	2,320	0	0	2,320
CHROMIUM	0	0	0	0	0	1,740	0	0	1,740
LEAD	0	0	0	0	0	87	0	0	87
Totals	**0**	**0**	**0**	**0**	**0**	**5,597**	**0**	**0**	**5,597**
ANOKA County, City of ANOKA -- FEDERAL CARTRIDGE COMPANY -- 900 EHLEN DRV									
COPPER COMPOUNDS	0	9[illegible]		0		4,800,846	0	0	4,810,368
ETHYLENE GLYCOL	55	0		0		0	0	553,115	553,170
LEAD COMPOUNDS	6	16,844	0	0	896,400	819,012	0	0	1,732,262
NITROGLYCERIN	0	0	0	0	0	0	3,996	490	4,486
ANTIMONY COMPOUNDS	1	244	0	0	0	0	0	0	245
BARIUM COMPOUNDS	4	1,482	0	0	0	0	0	0	1,486
NITRATE COMPOUNDS (WATER	0	0	0	0	0	0	0	38,943	38,943
Totals	**27,557**	**28,092**	**0**	**0**	**896,400**	**5,619,858**	**3,996**	**592,548**	**7,140,359**

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 2004, 128 facilities filed Certification Statements for 264 chemicals including 63 facilities who filed both a Form R and Certification Statement(s), and 65 facilities who filed only a Certification Statement(s).

The following facilities filed a Certification Statement(s) for the 2004 reporting year:

FACILITY NAME	ERC ID NUMBER	CHEMICAL NAME
Federal-Cartridge Co.	02-005-0004	Nitric Acid, Dibutyl Phthalate
Hoffman Enclosures, Inc.	02-005-0060	Nickel, Manganese, Chromium
Copper Sales, Inc.	02-005-0063	Copper Compounds
Onan Mfg.	02-055-0009	Ethylene Glycol
H.B. Fuller Co.	02-055-0018	Zinc Compounds
Land O'Lakes Farmland Feed	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
Dotson Co., Inc.	07-100-0082	Diisocyanates
Big Gain Inc.	07-160-0004	Zinc Compounds, Manganese Compounds, Copper Compounds

FACILITY NAME	ERC ID NUMBER	CHEMICAL NAME
Ochs Brick Co.	08-105-0002	Barium Compounds, Manganese Compounds
McLaughlin Gormley King	10-035-0008	Permethrin, Piperonyl Butoxide, Maleic Anhydride, Dipropyl Isocinchomeronate, Dicyclopentadiene, Phenothrin, Tetramethrin
Quali-Tech, Inc.	10-035-0031	Zinc Compounds, Manganese Compounds, Copper Compounds
Mammoth, Inc.	10-035-0041	Chlorodifluoromethane
Busch Ag. Resources	14-145-0010	Napthalene
Ethanol 2000	17-020-0002	Benzene, Cyclohexane, N-Hexane, Toluene, Xylene, Ethylbenzene
Image	18-015-0081	Diisocyanates
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
CHS Inc.	19-071-0004	Zinc Compounds
ChemCentral/Minnesota	19-080-0001	Ethylene Glycol, Ethylbenzene, Methyl Isobutyl Ketone, 1,2,4-Trimethylbenzene, N-Hexane, Methanol, N-Butyl Alcohol, Trichloroethylene
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, Cyclohexane, Chlorine, Ethylbenzene
Hubbard Feeds, Inc.	21-005-0002	Zinc Compounds, Manganese Compounds, Copper Compounds
Standard Iron & Wire Works, Inc.	21-005-0064	Nickel, Manganese, Chromium
Crown Fixtures Corp.	22-110-0014	Trichlorofluoromethane, Dichlorofluoromethane, Diisocyanates
Pro-Corn	23-134-0019	Benzene, Cyclohexane, Xylene, Toluene, Ethylbenzene, Zinc Compounds

FACILITY NAME	ERC ID NUMBER	CHEMICAL NAME
Agra Resources Coop	24-005-0081	Benzene, Cyclohexane, N-Hexane, Xylene, Toluene, Cumene, Ethylbenzene
Amesbury Group, Inc.	25-025-0029	Chromium Compounds
Hitchcock Industries	27-005-0013	Diisocyanates
FMS Corporation	27-005-0092	Ammonia
Caterpillar Paving Products, Inc.	27-015-0053	Ethylene Glycol
Medtronic Inc.	27-015-0084	Diisocyanates
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	Ethylene Glycol
Innovex, Inc.	27-120-0014	Hydrochloric Acid (aerosol only)
Hawkins, Inc.	27-135-0030	Formic Acid
Diamond Vogel – North Inc.	27-135-0079	Toluene Diisocyanate (mixed isomers)
Minneapolis Ready Mix	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
Pechiney Plastic Pkg.	27-215-0006	Diisocyanates
Northland Aluminum Products	27-215-0009	Phenol
Lamb-Weston/RDO Frozen	29-120-0003	Chlorine
Trouw Nutrition USA	34-175-0007	Copper Compounds, Manganese Compounds, Zinc 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

FACILITY NAME	ERC ID NUMBER	CHEMICAL NAME
Flint Hills Resources	42-095-0003	Toluene, Ethylbenzene, 1,2,4-Trimethylbenzene
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
Hutchinson Mfg., Inc.	43-055-0029	Chromium, Manganese, Nickel
Avery 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, Toluene, Cyclohexane, Xylene, Ethylbenzene
Hormel Foods Corp.	50-015-0002	Chlorine Dioxide, Sodium Nitrite
Alumacraft Boat Co.	52-080-0001	Diisocyanates
Hubbard Feeds, Inc.	53-150-0007	Zinc Compounds, Copper Compounds, Manganese Compounds
Ridley Block Oper.	53-150-0043	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
New Flyer	60-065-0037	Ethylene Glycol
Bell Lumber and Pole Co.	62-045-0001	Pentachlorophenol
C&H Chemical	62-070-0010	Glycol Ethers
Hawkins Terminal I	62-070-0030	Formic Acid
3M St. Paul – East Side	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	Methyl Isobutyl Ketone, N-Butyl Alcohol, Ethylene Glycol

FACILITY NAME	ERC ID NUMBER	CHEMICAL NAME
Brenntag Great Lakes	62-070-0082	Ethylene Glycol, 1,2,4-Trimethylbenzene, Methyl Isobutyl Ketone, Ethylbenzene, N-Butyl Alcohol, Naphthalene, Dichloromethane, Diethanolamine, Cyclohexane, Di(2-ethylhexyl) phthalate
Gross-Given Mfg. Co.	62-070-0108	Diisocyanates
Schwing America, Inc.	62-092-0001	Propylene
Universal Forest Products	62-095-0001	Copper Compounds
Aspen Research Corp.	62-095-0043	Chromium Compounds, Antimony Compounds
Central Bi-Products	64-110-0002	Chlorine, Chlorine Dioxide, Methanol
Schult Homes	64-110-0038	Diisocyanates
Minnesota Energy	65-040-0008	Benzene, Ammonia, 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
Duluth Brass Mfg.	69-125-0220	Copper
Innovative Pine Tech.	69-125-0238	Copper Compounds
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, Copper Compounds
Fremont Industries, Inc.	70-085-0008	Ethylene Glycol, Nitric Acid, Glycol Ethers, Sodium Nitrite, N-Methyl-2-Pyrrolidone
Cargill, Inc.	71-019-0012	Manganese Compounds
Heartland Corn Products	72-120-0010	Benzene, Cyclohexane, Ethylbenzene, Toluene, Xylene
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, Manganese
Standard Iron & Wire Works, Inc.	73-265-0028	Manganese, Chromium, Nickel
Tandem Products, Inc.	74-014-0039	Diisocyanates
Truth Hardware	74-070-0002	Chromium, Nickel

FACILITY NAME	ERC ID NUMBER	CHEMICAL NAME
Diversified Energy Co.	75-070-0014	Acrolein, Benzene, N-Hexane, Toluene, Cyclohexane, Ethylbenzene, Chlorine, Xylene
CNH America LLC - Benson	76-015-0028	Ethylene Glycol
Chippewa Valley Ethanol Co.	76-015-0036	Ammonia, Benzene, Toluene
Central Bi-Products	77-124-0002	Chlorine, Chlorine Dioxide
Federal-Mogul Powertrain Sys.	79-067-0003	Nickel
Andersen Corp.	82-015-0002	Diisocyanates
Nor-Lakes Services Midwest	82-070-0009	Zinc Compounds
Conagra Refrigerated Foods	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

Attachment 10: Facilities which submitted an EPA Form R in 2003 but are not subject to reporting in 2004

Facility Name & Location	County	ERC ID Number
Vision-Ease Lens, Ramsey	Anoka	02-095-0019
General Mills Operations, Chanhassen	Carver	10-030-0011
Lifecore Biomedical, Chaska	Carver	10-035-0038
Larco, Inc., Brainerd	Crow Wing	18-015-0008
Centerpoint Energy, Burnsville	Dakota	19-006-0029
Ecolab, Inc., Eagan	Dakota	19-025-0004
Con Agra Foods, Hastings	Dakota	19-060-0001
Flint Hills Resources, Rosemount	Dakota	19-145-0006
Dakota Premium Foods., South St. Paul	Dakota	19-155-0019
Natural Biologics LLC, Albert Lea	Freeborn	24-005-0082
Applied Coating Technology, Eden Prairie	Hennepin	27-056-0004
Douglas Corp., Eden Prairie	Hennepin	27-056-0076
Emerson Control Techniques, Eden Prairie	Hennepin	27-056-0093
Zenith Products Co., Maple Grove	Hennepin	27-115-0035
Graco, Inc., Minneapolis	Hennepin	27-135-0027
Permatite Mfg., Minneapolis	Hennepin	27-135-0517
Boston Scientific Corp., Plymouth	Hennepin	27-180-0053
Twin City Optical Co., Plymouth	Hennepin	27-180-0111
Lamb-Weston/RDO Frozen, Park Rapids	Hubbard	29-120-0003
Engineered Polymers Corp., Inc., Mora	Kanabec	33-065-0001
Schwan's Sales Enterprises, Marshall	Lyon	42-095-0044
Alumacraft Boat. Co., St. Peter	Nicollet	52-080-0001
Seneca Foods Corp., Rochester	Olmsted	55-095-0016
Mixon Inc., St. Paul	Ramsey	62-070-0047
Gerdau Ameristeel Recycling, St. Paul	Ramsey	62-070-0334
GE Interlogix, St. Paul	Ramsey	62-070-0417
Telamco Inc., Lonsdale	Rice	66-040-0007
Hexon Specialty Chemicals, Virginia	St. Louis	69-440-0002
Koch Materials Co., Savage	Scott	70-082-0006
Xcel Energy – Becker RDF, Becker	Sherburne	71-009-0018
Cold Spring Granite Co., Cold Spring	Stearns	73-040-0020
Truth Hardware – Paint Plant, Owatonna	Steele	74-070-0113
Valley Craft, Inc., Lake City	Wabasha	79-067-0007

Attachment 11: "Core" Set of Reported Chemicals (1988-2004)

The Environmental Protection Agency (EPA) has the authority to add chemicals to the Section 313 Toxic Chemical List (see Appendix A on page 78) 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 (2004). Pages 50 to 53 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 2004. 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 1988-2004 time period.

To facilitate a full understanding of the release/transfer data provided, two basic clarifications are needed. First, if 1988 or 2004 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 1988-2004, 621 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 1988-2004 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 54-55 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 - 2004)

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
	2004	1	0	0	0	0	0	0
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
	2004	9	32,357	58,209	12	22	0	1,058
1,2-Butylene oxide	1988	1	1,300	0	0	0	0	0
1,2-Dibromoethane	1988	1	0	5	0	0	0	0
	2004	1	0	18	0	0	0	4
1,2-Dichloroethane	1988	2	83	12,009	0	0	0	9,400
	2004	1	7	24	0	0	0	1
1,3-Butadiene	1988	1	0	13,000	30	0	0	30
	2004	1	832	863	2	0	0	0
1,4-Dioxane	1988	3	1,879	23,584	0	0	45,985	421
	2004	1	255	1,900	0	0	45,000	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
	2004	1	24	240	0	0	0	0
2-Methoxyethanol	1988	1	0	9,800	0	0	0	0
4,4'-Isopropylidenediphenol	2004	2	0	1,829	0	0	0	3,763
4,4'-Methylenedianiline	1988	2	0	0	0	0	0	8,145
	2004	1	0	0	0	0	0	0
Acetaldehyde	2004	12	1,505	162,404	620	5	9,710	0
Acetonitrile	2004	1	0	0	0	0	0	0
Acrolein	2004	3	0	3,493	0	0	0	0
Acrylic acid	1988	1	4	120	0	0	0	0
	2004	2	265	18,155	270	0	0	53,000
Acrylonitrile	1988	1	0	0	0	0	0	0
Aluminum (fume or dust)	1988	4	0	27,688	4,100	0	63	109,842
	2004	6	745	57,894	0	0	0	116,959
Anthracene	2004	1	2	22	0	0	0	93
Antimony	1988	2	130	140	0	19,098	68	0
	2004	1	17	14	0	0	310	24,174
Antimony compounds	1988	3	5	63	6	18	28	6,405
	2004	8	0	114	1,869	0	22	13,927
Arsenic	1988	2	65	74	160	5,981	6	0
	2004	1	8	7	0	0	47	14,504
Arsenic compounds	1988	2	0	250	0	0	0	1,350
	2004	1	5	190	130	19,260	0	0
Barium	1988	4	0	21,870	1,000	84,900	0	267
	2004	2	0	114,718	0	0	0	694
Barium compounds	1988	3	250	250	0	0	250	2,135
	2004	19	887	62,634	3,230	7,378,249	19,310	926,698
Benzene	1988	4	14,180	300,310	30	970	0	715
	2004	5	9,154	7,460	2,724	17	0	1,703

Note: See important explanatory information on pages 48-49.

Core Set of Reported Chemicals (1988 - 2004)

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)
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
	2004	1	25	9	0	0	0	137
Butyl acrylate	2004	1	63	793	2	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
	2004	2	1	3	0	0	0	1
Carbon tetrachloride	1988	1	0	0	0	0	0	0
Carbonyl sulfide	2004	3	1	11,917	0	0	0	0
Catechol	1988	1	0	0	0	0	14,000	0
	2004	2	0	0	0	5	1,142	0
Chlorine	1988	40	14,906	469,794	26,804	0	42,724	62,000
	2004	7	240	2,247	0	0	13	0
Chlorine dioxide	1988	3	500	19,250	0	0	0	0
	2004	2	10	26,084	0	0	0	0
Chloroform	1988	2	102,000	161,000	79,000	430	17,000	0
Chloromethane	1988	1	143,000	0	0	0	0	0
	2004	1	0	0	0	0	0	0
Chromium	1988	11	757	1,558	1,313	12,250	1,258	25,734
	2004	35	269	1,323	0	0	87	31,253
Chromium compounds	1988	11	1,300	1,496	0	12,056	46,593	36,042
	2004	19	520	1,518	228	93,705	33,673	179,486
Cobalt	1988	2	250	65	200	290	0	2
	2004	3	0	5	0	0	0	0
Cobalt compounds	1988	2	3	649	0	0	0	9,686
	2004	4	32	230	0	23,200	0	4,777
Copper	1988	27	2,540	3,013	57	0	3,672	30,474
	2004	50	9,212	7,554	6	19	1,541	20,738
Copper compounds	1988	15	511	1,009	5	1,283	9,695	190,419
	2004	22	290	3,259	758	176,075	1,369	52,031
Cresol (mixed isomers)	1988	1	0	0	0	24	0	0
	2004	1	8	330	0	0	0	457
Cumene	1988	1	91	0	30	0	0	30
	2004	2	973	110	0	0	0	7
Cyanide compounds	1988	8	1,250	750	0	0	27,882	7,700
	2004	5	314	1,408	0	0	1,087	6,348
Cyclohexane	1988	3	5,004	67,240	150	0	0	30
	2004	7	6,894	32,864	5	0	0	5,047
Decabromodiphenyl oxide	2004	4	0	0	0	0	0	8,129
Di(2-ethylhexyl) phthalate	1988	3	0	4,100	0	3	1	4,860
	2004	2	750	2	0	0	0	1,982
Dibenzofuran	2004	1	0	1	0	0	0	89

Note: See important explanatory information on pages 48-49.

Core Set of Reported Chemicals (1988 - 2004)

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)
Dichloromethane	1988	40	594,104	2,176,785	1,800	0	1,839	188,395
	2004	8	10,002	71,005	0	0	358	1,578
Diethanolamine	1988	3	0	250	0	0	13,362	250
Dimethyl phthalate	1988	1	25,500	0	0	0	0	0
	2004	1	0	281	0	0	0	0
Ethyl acrylate	1988	1	2,400	960	0	0	0	0
	2004	1	4	41	0	0	0	0
Ethylbenzene	1988	11	20,790	443,063	30	1,800	500	28,143
	2004	13	14,770	73,757	12	6	0	186
Ethylene	1988	2	23,700	310	30	0	0	30
	2004	2	4,820	360	3	0	0	0
Ethylene glycol	1988	20	33,394	64,116	1,493	0	303,604	392,057
	2004	19	6,384	1,156	5,882	0	597,019	16,328
Ethylene oxide	2004	1	110	121	0	0	0	0
Formaldehyde	1988	18	4,700	749,359	3,900	0	8,197	8,385
	2004	16	1,140	163,720	0	5	11,579	842
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
	2004	21	107,837	428,122	0	0	52,398	250
Hexachlorobenzene	2004	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
	2004	14	236	259,429	0	0	16	98,785
Lead	1988	6	6,760	7,530	1,510	142,955	493	69,388
	2004	97	232	397	0	0	518	3,871
Lead compounds	1988	8	12,250	5,043	0	370,747	1,505	18,291
	2004	73	1,511	8,137	550	79,601	397	331,120
Maleic anhydride	1988	5	317	663	0	0	0	42
	2004	2	255	1,102	0	0	0	5,500
Manganese	1988	9	510	1,330	360	0	250	16,694
	2004	30	837	3,909	0	0	180	61,943
Manganese compounds	1988	10	13,000	2,910	5	130,000	4,810	1,050
	2004	12	1,852	13,573	25,540	1,494,580	122,495	65,683
Mercury	1988	1	2	130	0	18	0	0
	2004	5	41	16	0	10	5	2
Mercury compounds	2004	20	9	1,745	0	80	12	39
Methanol	1988	32	128,628	2,199,194	0	280,000	2,245,700	289,959
	2004	32	98,217	1,408,486	1,318	0	9,624,883	75,657
Methyl acrylate	1988	1	70	1,300	0	0	0	0
	2004	1	11	107	0	0	0	0
Methyl isobutyl ketone	1988	23	31,057	572,202	0	0	500	57,660
	2004	8	11,555	76,587	0	0	0	3,700
Methyl methacrylate	1988	1	1,500	660	73	0	0	0
	2004	5	38,630	41,015	0	0	0	0
Molybdenum trioxide	1988	2	250	0	0	0	0	0
	2004	3	135	5	5	0	0	140
n-Butyl alcohol	1988	20	48,999	807,983	0	0	100	85,270
	2004	9	85,110	412,125	0	0	0	0
Naphthalene	1988	3	13,704	2,094	3	1,500	0	51
	2004	8	3,926	423	12	103	0	651

Note: See important explanatory information on pages 48-49

Core Set of Reported Chemicals (1988 - 2004)

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)
Nickel	1988	13	788	760	1,260	2,500	919	45,295
	2004	40	184	1,922	0	22	581	1,799
Nickel compounds	1988	4	1,355	750	0	86,040	831	1,019
	2004	20	5,684	1,408	306	101,710	903	94,473
Nitric acid	1988	52	3,156	44,371	250	0	140,957	60,501
	2004	48	2,791	31,642	0	0	52,075	84,207
Nitroglycerin	1988	1	0	0	0	250	0	0
	2004	1	0	0	0	0	0	490
O-Toluidine	1988	1	0	0	0	0	0	0
Pentachlorophenol	1988	1	250	250	0	0	0	0
Peracetic acid	1988	1	15	8	0	0	0	0
	2004	1	66	1,155	0	0	0	0
Phenol	1988	10	2,780	231,949	1,200	289,310	500	21,218
	2004	7	2,550	48,598	130	0	2,238	1,229
Phosphorus (yellow or white)	2004	1	0	0	1,224	0	0	0
Phthalic anhydride	1988	2	0	10,750	0	0	0	0
	2004	2	23	737	0	0	0	6,000
Propylene	1988	3	153,000	67,250	30	0	0	30
	2004	2	29,008	8,610	3	0	0	0
Propylene oxide	1988	1	750	750	0	0	0	0
	2004	1	1	475	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
	2004	1	7	24	2,800	0	0	98
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
	2004	32	458,356	840,007	0	0	0	1,344
tert-Butyl alcohol	1988	1	0	17,799	0	0	0	0
	2004	3	3	1,235	0	0	0	16
Tetrachloroethylene	1988	8	51,086	107,564	0	0	603	14,000
	2004	5	5,653	125,319	0	0	0	18,689
Toluene	1988	72	750,321	10,673,905	30	750	846	1,693,032
	2004	33	143,477	548,341	6	11	10	353,750
Toluene-2,4-diisocyanate	1988	7	870	575	0	0	0	2,250
	2004	1	0	0	0	0	0	0
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
	2004	15	50,541	178,006	0	0	36	11,074
Vanadium (fume or dust)	1988	1	0	150	0	630	0	0
Vinyl acetate	2004	1	14	136	0	0	0	0
Xylene (mixed isomers)	1988	62	561,448	4,602,829	30	2,000	800	291,947
	2004	36	112,424	542,892	30	37	3	3,512
Zinc compounds	1988	19	84,755	22,575	14,410	1,501,773	7,423	118,118
	2004	35	6,848	32,090	4,873	132,207	1,887	121,246
	1988 Totals	362	8,005,324	29,198,524	141,075	2,947,981	3,271,231	4,452,455
	2004 Totals	372	1,207,919	5,908,061	52,551	9,498,929	10,580,905	2,831,262

Note: See important explanatory information on pages 48-49.

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

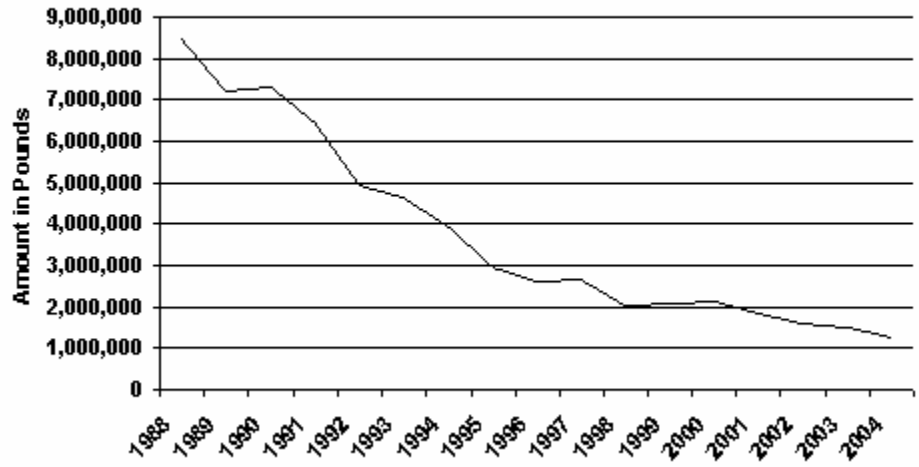


Figure 7: "Core" Set of Chemicals - Stack Air

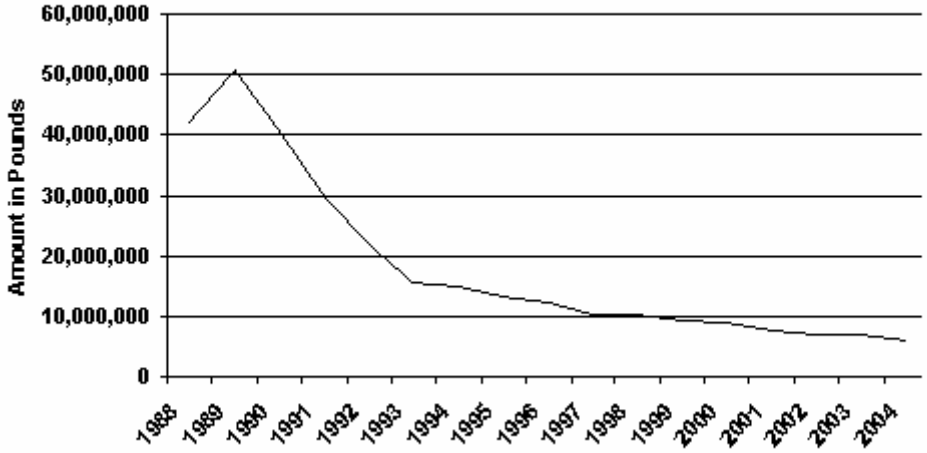
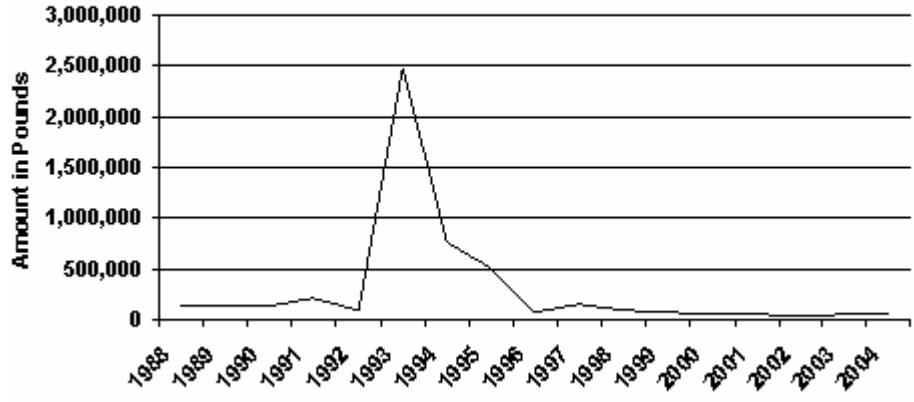


Figure 8: "Core" Set of Chemicals - Water



Note: See important explanatory information on pages 48-49.

Figure 9: "Core" Set of Chemicals - Land

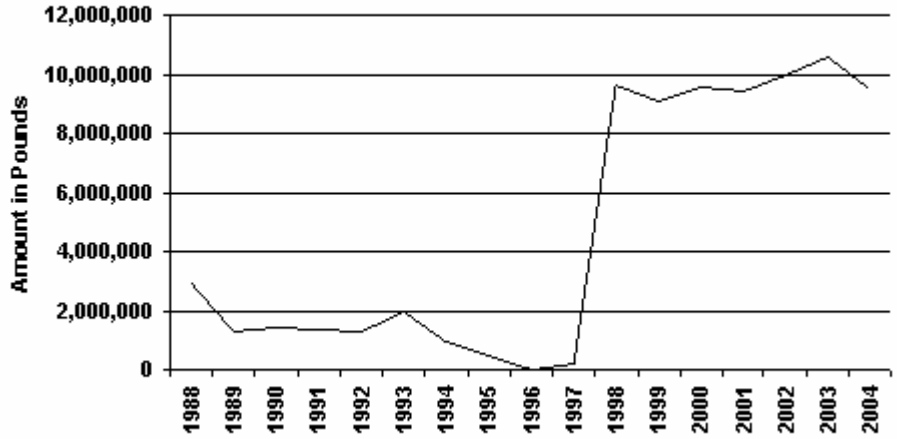


Figure 10: "Core" Set of Chemicals - POTW

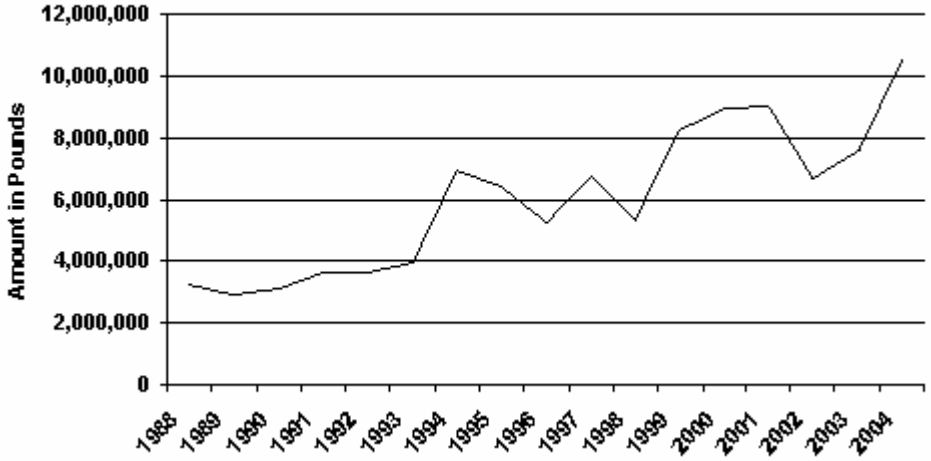
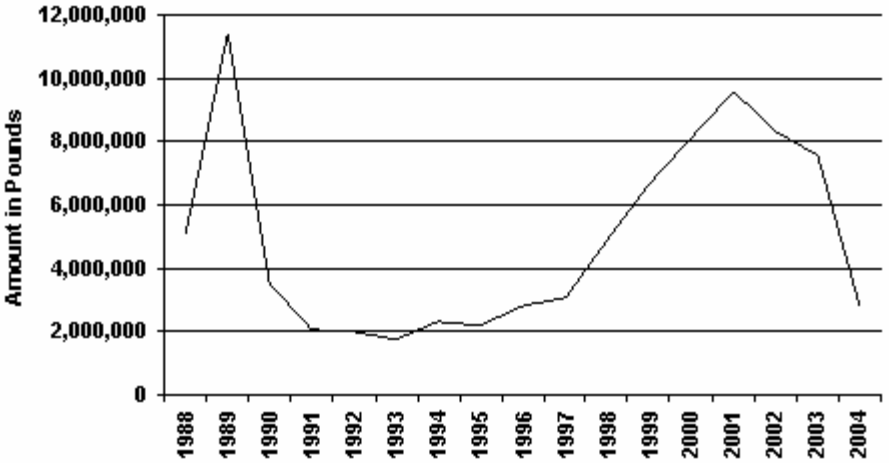


Figure 11: "Core" Set of Chemicals - Offsite Transfers
(Disposal and Treatment Only)



Note: See important explanatory information on pages 48-49.

V. Overview of the 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 Minnesota Pollution Control Agency 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 1995-2004 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.

Progress Report Issues

Approximately 56% of the reporting facilities have chosen to define non-numeric pollution prevention objectives. Discussions between the Minnesota EPCRA Program, 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 60 summarizes 2004 Progress Report information. A complete listing is available from the Minnesota EPCRA Program (651-201-7416). 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 62 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 60 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 2003 & 2004 - actual quantity of this chemical reported on the EPA Form R (Sections 8.1 - 8.7) in 2003 and 2004

Source Reduction - describes the reduction activity code(s) that was used to meet pollution prevention objective (see pages 61-62 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 2004

State of Minnesota
Department of Public Safety
Minnesota EPCRA Program

Sorted by County, City, Facility

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

Chemical	Baseline Year	Quantity	Numeric Objective, If Applicable / Releases and Transfers (#) 2003	2004	2005	2006	Reported		P.R.	Met
Lead Compounds	2003	1003					2002	1,281		Yes

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.

Non Numeric Progress: IN OUR BASELINE OF 2003 WE SHIPPED OUT 1003 POUNDS OF LEAD TO BE RECYCLED. IN 2004 WE SHIPPED OUT 440 POUNDS OF LEAD TO BE RECYCLED.

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 (#) 2003	2004	2005	2006	Reported		P.R.	Met
Chromium	2002	1407					2002	1,407		No

Process P19 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)
Intended Activity
W81 CHANGED PRODUCT SPECIFICATIONS
Employed Activity
W81 CHANGED PRODUCT SPECIFICATIONS

Process P38 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)
Intended Activity
W81 CHANGED PRODUCT SPECIFICATIONS
Employed Activity
W58 INCREASED MACHINE OPERATED WELDING, THEREBY REDUCING HUMAN ERROR AND METAL WASTE.
W81 CHANGED PRODUCT SPECIFICATIONS

Barriers to P2:
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical	Baseline Year	Quantity	Numeric Objective, If Applicable / Releases and Transfers (#) 2003	2004	2005	2006	Reported		P.R.	Met
Lead	2002	104					2002	104		No

Process P19 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)
Intended Activity
W81 CHANGED PRODUCT SPECIFICATIONS

Attachment 13: Facilities not subject to Pollution Prevention Progress Reporting in 2004

Facility Name and Location	County	ERC ID #
ALUMI PLATE INC., COON RAPIDS	Anoka	020500077
BTW INC., COON RAPIDS	Anoka	020500083
FIRESTONE METAL PRODUCTS , ANOKA	Anoka	020050063
JOHN DEERE CYLINDER DIVISION - MPLS , COON RAPIDS	Anoka	020500082
MICRO CONTROL CO. , FRIDLEY	Anoka	020550078
TEAM INDUSTRIES INC. - DETROIT LAKES , DETROIT LAKES	Becker	030550054
STONE PRODUCTS INC. , SAUK RAPIDS	Benton	050730032
QUANTUM CONTROLS INC. , CHANHASSEN	Carver	100300032
BUSCH AGRICULTURAL RESOURCES, INC. , MOORHEAD	Clay	141450010
LOU-RICH, INC. , ALBERT LEA	Freeborn	240050008
934TH AIRLIFT WING RESERVE STN., IAP , MINNEAPOLIS	Hennepin	279990021
BOSTON SCIENTIFIC CORPORATION , PLYMOUTH	Hennepin	271800046
DETECTOR ELECTRONICS CORPORATION , BLOOMINGTON	Hennepin	270050126
EDCO PRODUCTS INC. , HOPKINS	Hennepin	270950048
FOAM ENTERPRISES, INC. , PLYMOUTH	Hennepin	271800069
GENERAL MILLS OPERATIONS INC./PURITY OATS , MINNEAPOLIS	Hennepin	271350249
GRACO, INC. - RIVERSIDE PLANT , MINNEAPOLIS	Hennepin	271350177
HANSON SPANCRETE MIDWEST INC. , MAPLE GROVE	Hennepin	271150036
JAMES FORD BELL RESEARCH (GENERAL MILLS) , GOLDEN VALLEY	Hennepin	270700003
JOYNER'S DIE CASTING AND PLATING CO. , BROOKLYN PARK	Hennepin	270150004
MIDWEST FINISHING , BROOKLYN PARK	Hennepin	270150090
ROSEMOUNT, INC. , EDEN PRAIRIE	Hennepin	270560009
WANNER ENGINEERING INC. , MINNEAPOLIS	Hennepin	271350657
POTLATCH CORP. - LUMBERMILL , BEMIDJI	Hubbard	290210003
AGCO CORP. JACKSON OPERATIONS , JACKSON	Jackson	320600007
ASSOCIATED MILK PRODUCERS, INC. , GLENCOE	McLeod	430300029
ANDERSON CHEMICAL CO. , LITCHFIELD	Meeker	471000005
MN SOYBEAN PROCESSORS , BREWSTER	Nobles	530250004
AAA METAL FINISHING, INC. , ST. PAUL	Ramsey	620700399
ACCU-TRONICS MFG. INC. , ST. PAUL	Ramsey	620700461
C & H CHEMICAL COMPANY , ST. PAUL	Ramsey	620700010
ELECTRONIC INDUSTRIES HOLDING, INC. , VADNAIS HEIGHTS	Ramsey	620850014
ARTESYN TECHNOLOGIES, INC. , REDWOOD FALLS	Redwood	641100012
SCHWEISS DISTRIBUTING INC. , HECTOR	Renville	650940018
U.S. DOD USAF DULUTH ANG AFB, MINNESOTA , DULUTH	St Louis	691250230
COLD SPRING GRANITE - MAIN PLANT , COLD SPRING	Stearns	730400002
COLD SPRING GRANITE - WEST , COLD SPRING	Stearns	730400019
DEAN FOODS NORTH CENTRAL, INC. , WOODBURY	Washington	821910001
BEHRENS INC , WINONA	Winona	851450092

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.

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

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 2004 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 2004 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 2004
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
N-HEXANE	453,080	1,746,388	2,199,468
AMMONIA	571,650	957,452	1,529,102
METHANOL	98,217	1,408,486	1,506,703
STYRENE	458,356	840,007	1,298,363
HYDROCHLORIC ACID (AEROSOL FORMS ONLY)	15,547	804,938	820,485
TOLUENE	143,477	548,341	691,818
XYLENE (MIXED ISOMERS)	112,424	542,892	655,316
GLYCOL ETHERS	107,837	428,122	535,959
N-BUTYL ALCOHOL	85,110	412,125	497,235
HYDROGEN FLUORIDE	236	259,429	259,665
SULFURIC ACID (AEROSOL FORMS ONLY)	271	242,241	242,512
TRICHLOROETHYLENE	50,541	178,006	228,547
FORMALDEHYDE	1,140	163,720	164,860
ACETALDEHYDE	1,505	162,404	163,909
TETRACHLOROETHYLENE	5,653	125,319	130,972
1-CHLORO-1,1-DIFLUOROETHANE	126,690	0	126,690
BARIUM	0	114,718	114,718
1,2,4-TRIMETHYLBENZENE	32,357	58,209	90,566
ETHYLBENZENE	14,770	73,757	88,527
METHYL ISOBUTYL KETONE	11,555	76,587	88,142
DICHLOROMETHANE	10,002	71,005	81,007
METHYL METHACRYLATE	38,630	41,015	79,645
1,1-DICHLORO-1-FLUOROETHANE	10,400	59,100	69,500
BARIUM COMPOUNDS	887	62,634	63,521
ALUMINUM (FUME OR DUST)	745	57,894	58,639
PHENOL	2,550	48,598	51,148
CYCLOHEXANE	6,894	32,864	39,758
ZINC COMPOUNDS	6,848	32,090	38,938
PROPYLENE	29,008	8,610	37,618
NITRIC ACID	2,791	31,642	34,433
CHLORINE DIOXIDE	10	26,084	26,094
N,N-DIMETHYLFORMAMIDE	816	23,857	24,673
N-METHYL-2-PYRROLIDONE	547	22,735	23,282
FORMIC ACID	9,147	9,597	18,744
ACRYLIC ACID	265	18,155	18,420
COPPER	9,212	7,554	16,766
BENZENE	9,154	7,460	16,614
MANGANESE COMPOUNDS	1,852	13,573	15,425
CARBONYL SULFIDE	1	11,917	11,918
LEAD COMPOUNDS	1,511	8,137	9,648
ETHYLENE GLYCOL	6,384	1,156	7,540
NICKEL COMPOUNDS	5,684	1,408	7,092
CHLORODIFLUOROMETHANE	6,510	0	6,510
ETHYLENE	4,820	360	5,180
POLYCYCLIC AROMATIC COMPOUNDS	1,465	3,564	5,029
MANGANESE	837	3,909	4,746
NAPHTHALENE	3,926	423	4,349
DIISOCYANATES	312	4,003	4,315
COPPER COMPOUNDS	290	3,259	3,549
ACROLEIN	0	3,493	3,493
VANADIUM COMPOUNDS	279	3,121	3,400
ZINC (FUME OR DUST)	532	2,832	3,364
CHLORINE	240	2,247	2,487
1,4-DIOXANE	255	1,900	2,155
NICKEL	184	1,922	2,106
CHROMIUM COMPOUNDS	520	1,518	2,038
4,4'-ISOPROPYLIDENEDIPHENOL	0	1,829	1,829
MERCURY COMPOUNDS	9	1,745	1,754
CYANIDE COMPOUNDS	314	1,408	1,722
1,3-BUTADIENE	832	863	1,695
CHROMIUM	269	1,323	1,592
MALEIC ANHYDRIDE	255	1,102	1,357
TERT-BUTYL ALCOHOL	3	1,235	1,238
PERACETIC ACID	66	1,155	1,221
CUMENE	973	110	1,083

Attachment 14: Chemicals released for the year 2004
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
BUTYL ACRYLATE	63	793	856
SODIUM NITRITE	821	0	821
PHTHALIC ANHYDRIDE	23	737	760
DI(2-ETHYLHEXYL) PHTHALATE	750	2	752
LEAD	232	397	629
DICYCLOPENTADIENE	50	555	605
TOLUENE DIISOCYANATE (MIXED ISOMERS)	176	389	565
PROPYLENE OXIDE	1	475	476
CRESOL (MIXED ISOMERS)	8	330	338
DIMETHYL PHTHALATE	0	281	281
2-ETHOXYETHANOL	24	240	264
COBALT COMPOUNDS	32	230	262
NITRATE COMPOUNDS (WATER DISSOCIABLE)	0	256	256
CHLOROTRIFLUOROMETHANE	255	0	255
ETHYLENE OXIDE	110	121	231
ARSENIC COMPOUNDS	5	190	195
VINYL ACETATE	14	136	150
MOLYBDENUM TRIOXIDE	135	5	140
METHYL ACRYLATE	11	107	118
ANTIMONY COMPOUNDS	0	114	114
BENZO(G,H,I)PERYLENE	12	70	82
MERCURY	41	16	57
ETHYL ACRYLATE	4	41	45
BIPHENYL	25	9	34
ANTIMONY	17	14	31
SELENIUM COMPOUNDS	7	24	31
1,2-DICHLOROETHANE	7	24	31
PHENANTHRENE	2	29	31
ANTHRACENE	2	22	24
1,2-DIBROMOETHANE	0	18	18
ARSENIC	8	7	15
TRIETHYLAMINE	1	7	8
COBALT	0	5	5
CARBON DISULFIDE	1	3	4
DIBENZOFURAN	0	1	1
TETRABROMOBISPHENOL A	0	1	1
DAZOMET	0	0	0
DECABROMODIPHENYL OXIDE	0	0	0
CATECHOL	0	0	0
1,3-PHENYLENEDIAMINE	0	0	0
NABAM	0	0	0
HEXACHLOROBENZENE	0	0	0
4,4'-METHYLENEDIANILINE	0	0	0
ACETONITRILE	0	0	0
TOLUENE-2,4-DIISOCYANATE	0	0	0
1,1,1-TRICHLOROETHANE	0	0	0
CHLOROMETHANE	0	0	0
SODIUM DIMETHYLDITHIOCARBAMATE	0	0	0
PHOSPHORUS (YELLOW OR WHITE)	0	0	0
NITROGLYCERIN	0	0	0
Totals	2,469,482	9,789,196	12,258,679

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	1855	19.80	23.07	water
lead (Pb)	2	12344	15.55	19.64	water
copper	3	20807	15.06	19.38	water
dioxins (total 2,3,7,8 congeners)	4	0.019261	21.09	19.37	terr flora
chromium (VI)*	5	4201	15.63	19.25	water
nickel	6	9241	14.96	18.92	aq biota
zinc	7	67643	14.03	18.86	water
aluminum	8	58639	13.96	18.72	water
barium	9	178275	12.69	17.94	water
manganese	10	26415	13.38	17.80	water
antimony	11	145	15.53	17.69	aq biota
tetrachloroethylene	12	130972	12.30	17.42	air
arsenic	13	210	15.08	17.40	aq biota
dichloromethane (methylene chloride)	14	81007	12.32	17.23	air
selenium	15	31	15.35	16.84	water
acrolein	16	3493	13.24	16.78	air
trichloroethylene	17	228547	11.09	16.45	air
acetaldehyde	18	163909	10.96	16.17	air
formaldehyde	19	164860	10.91	16.12	air
acrylic acid	20	18420	11.74	16.01	air
1,2-dibromoethane	21	18	14.75	16.01	air/UR
hexane (n-)	22	2199468	9.57	15.91	air
styrene	23	1298363	9.63	15.75	air
chromium (III)*	24	4201	12.12	15.74	water
butadiene (1,3-)	25	1695	12.35	15.58	air
ammonia	26	1529102	9.39	15.58	air
benzene	27	16614	11.16	15.39	air
1,2-dichloroethane	28	31	13.89	15.38	air/UR
hydrogen chloride	29	820485	9.40	15.31	air
diethylhexylphthalate (2-)	30	752	12.42	15.29	water
chlorine dioxide	31	26094	10.71	15.13	air
propylene oxide	32	476	12.19	14.87	air
methyl isobutyl ketone (MIBK)	33	88142	9.76	14.71	air
dioxane(1,4-)	34	2155	11.35	14.68	water/SF
xylenes	35	655316	8.77	14.58	air
toluene	36	691818	8.64	14.48	air
ethylene oxide	37	231	11.67	14.03	air
ethylbenzene	38	88527	8.95	13.89	air

methanol	39	1506703	7.50	13.68	water
toluene diisocyanate	40	565	10.88	13.63	air/TLV
chlorine	41	2487	10.22	13.61	air
cumene (isopropyl benzene)	42	1083	10.44	13.47	air
n-butyl alcohol	43	497235	7.50	13.20	water
phenol	44	51148	8.45	13.16	water
dimethylformamide (n,n-)	45	24673	8.74	13.13	air
trimethylbenzene	46	90566	8.16	13.12	air/TLV
cyclohexane	47	39758	7.94	12.54	air
sulfuric acid	48	242512	7.10	12.48	air
tert-butyl alcohol	49	1238	9.30	12.39	air
naphthalene	50	4349	8.48	12.12	water
carbon disulfide	51	4	11.39	11.99	air
ethoxyethanol (2-, = "cellosolve")	52	264	9.44	11.86	air
cresol/cresylic acid	53	338	8.82	11.35	air/TLV
ethylene glycol	54	7540	7.26	11.13	water
vinyl acetate	55	150	8.79	10.97	air
ethyl acrylate	56	45	9.18	10.84	water
maleic anhydride	57	1357	7.63	10.76	water
triethylamine	58	8	9.82	10.72	air/Rfc
dimethyl phthalate	59	281	7.67	10.12	water
methyl acrylate	60	118	7.21	9.28	water/RfD
dibenzofuran	61	1	9.05	9.05	air
phthalic anhydride	62	760	6.03	8.91	terr flora
methyl methacrylate	63	79645	3.79	8.69	water
biphenyl (diphenyl)	64	34	3.97	5.50	aq biota
anthracene	65	24	4.05	5.43	water
chromium (total)*	66	4201	0.00	3.62	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 though 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 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 Methacryate: 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 sever 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 sever 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.

Table II. EPCRA Section 313 Chemical List For Reporting Year 2004 (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:

Chemical	CAS Number	Qualifier
Aluminum (fume or dust)	7429-90-5	**Only** if it is a fume or dust form.
Aluminum oxide (fibrous forms)	1344-28-1	**Only** 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	**Only** 10% of aqueous forms. 100% of anhydrous forms.
Asbestos (friable)	1332-21-4	**Only** 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	**Only** if it is an aerosol form as defined.
Phosphorus (yellow or white)	7723-14-0	**Only** 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	**Only** if it is an aerosol form as defined.
Vanadium (except when contained in an alloy)	7440-62-2	**Except** if it is contained in an alloy.
Zinc (fume or dust)	7440-66-6	**Only** 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.

Chemical/ Chemical Category	CAS Number	Qualifier
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	**Only** 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	**Only** if it is being manufactured by the strong acid process. Facilities that process or otherwise use isopropyl alcohol are not covered.
Saccharin (only persons who manufacture are subject, no supplier notification)	81-07-2	**Only** 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.

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 2004 calendar year reporting. Some of the EPCRA Section 313 chemicals listed have parenthetic 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 only processes or otherwise uses either of these EPCRA Section 313 chemicals would not be required to report for these EPCRA Section 313 chemicals. In both cases, supplier notification does not apply because only manufacturers, not users, of these two EPCRA Section 313 chemicals 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-allethrone]	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
33089-61-1	Amitraz	1.0
61-82-5	Amitrole	0.1
7664-41-7	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)	1.0
101-05-3	Anilazine [4,6-Dichloro-N-(2-chlorophenyl)-1,3,5-triazin-2-amine]	1.0
62-53-3	Aniline	1.0
90-04-0	o-Anisidine	0.1
104-94-9	p-Anisidine	1.0
134-29-2	o-Anisidine hydrochloride	0.1
120-12-7	Anthracene	1.0
7440-36-0	Antimony	1.0
7440-38-2	Arsenic	0.1
1332-21-4	Asbestos (friable)	0.1
1912-24-9	Atrazine (6-Chloro-N-ethyl-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine)	1.0
7440-39-3	Barium	1.0
22781-23-3	Bendiocarb [2,2-Dimethyl-1,3-benzodioxol-4-ol methylcarbamate]	1.0
1861-40-1	Benfluralin (N-Butyl-N-ethyl-2,6-dinitro-4-(trifluoromethyl)benzenamine)	1.0
17804-35-2	Benomyl	1.0
98-87-3	Benzal chloride	1.0
55-21-0	Benzamide	1.0
71-43-2	Benzene	0.1
92-87-5	Benzidine	0.1
98-07-7	Benzoic trichloride (Benzotrichloride)	0.1
191-24-2	Benzo(g,h,i)perylene	*
98-88-4	Benzoyl chloride	1.0
94-36-0	Benzoyl peroxide	1.0
100-44-7	Benzyl chloride	1.0
7440-41-7	Beryllium	0.1
82657-04-3	Bifenthrin	1.0
92-52-4	Biphenyl	1.0
111-91-1	Bis(2-chloroethoxy) methane	1.0
111-44-4	Bis(2-chloroethyl) ether	1.0
542-88-1	Bis(chloromethyl) ether	0.1
108-60-1	Bis(2-chloro-1-methylethyl)ether	1.0
56-35-9	Bis(tributyltin) oxide	1.0
10294-34-5	Boron trichloride	1.0
7637-07-2	Boron trifluoride	1.0
314-40-9	Bromacil (5-Bromo-6-methyl-3-(1-methylpropyl)-2,4(1H,3H)-pyrimidinedione)	1.0
53404-19-6	Bromacil, lithium salt [2,4(1H,3H)-Pyrimidinedione,5-bromo-6-methyl-3-(1-methylpropyl), lithium salt]	1.0
7726-95-6	Bromine	1.0
35691-65-7	1-Bromo-1-(bromomethyl)-1,3-propanedicarbonitrile	1.0
353-59-3	Bromochlorodifluoromethane (Halon 1211)	1.0
75-25-2	Bromoform (Tribromomethane)	1.0
74-83-9	Bromomethane (Methyl bromide)	1.0
75-63-8	Bromotrifluoromethane (Halon 1301)	1.0
1689-84-5	Bromoxynil (3,5-Dibromo-4-hydroxybenzonitrile)	1.0
1689-99-2	Bromoxynil octanoate (Octanoic acid, 2,6-dibromo-4-cyanophenylester)	1.0
357-57-3	Brucine	1.0
106-99-0	1,3-Butadiene	0.1
141-32-2	Butyl acrylate	1.0
71-36-3	n-Butyl alcohol	1.0
78-92-2	sec-Butyl alcohol	1.0
75-65-0	tert-Butyl alcohol	1.0
106-88-7	1,2-Butylene oxide	0.1
123-72-8	Butyraldehyde	1.0
7440-43-9	Cadmium	0.1
156-62-7	Calcium cyanamide	1.0
133-06-2	Captan [1H-Isoindole-1,3(2H)-dione, 3a,4,7,7a-tetrahydro-2-[(trichloromethyl)thio]-]	1.0
63-25-2	Carbaryl [1-Naphthalenol, methylcarbamate]	1.0
1563-66-2	Carbofuran	1.0
75-15-0	Carbon disulfide	1.0
56-23-5	Carbon tetrachloride	0.1
463-58-1	Carbonyl sulfide	1.0
5234-68-4	Carboxin (5,6-Dihydro-2-methyl-N-phenyl-1,4-oxathiin-3-carboxamide)	1.0
120-80-9	Catechol	0.1
2439-01-2	Chinomethionat [6-Methyl-1,3-dithiolo[4,5-b]quinoxalin-2-one]	1.0
133-90-4	Chloramben [Benzoic acid, 3-amino-2,5-dichloro-]	1.0
57-74-9	Chlordane [4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-]	*

CAS Number	Chemical Name	*De Minimis* Limit
115-28-6	Chlorendic acid	0.1
90982-32-4	Chlorimuron ethyl [Ethyl-2-[[[[(4-chloro-6-methoxyprimidin-2-yl)amino]carbonyl]amino]sulfonyl] benzoate]	1.0
7782-50-5	Chlorine	1.0
10049-04-4	Chlorine dioxide	1.0
79-11-8	Chloroacetic acid	1.0
532-27-4	2-Chloroacetophenone	1.0
4080-31-3	1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride	1.0
106-47-8	p-Chloroaniline	0.1
108-90-7	Chlorobenzene	1.0
510-15-6	Chlorobenzilate [Benzeneacetic acid, 4-chloro-.alpha.- (4-chlorophenyl)-.alpha.-hydroxy-, ethyl ester]	1.0
75-68-3	1-Chloro-1,1-difluoroethane (HCFC-142b)	1.0
75-45-6	Chlorodifluoromethane (HCFC-22)	1.0
75-00-3	Chloroethane (Ethyl chloride)	1.0
67-66-3	Chloroform	0.1
74-87-3	Chloromethane (Methyl chloride)	1.0
107-30-2	Chloromethyl methyl ether	0.1
563-47-3	3-Chloro-2-methyl-1-propene	0.1
104-12-1	p-Chlorophenyl isocyanate	1.0
76-06-2	Chloropicrin	1.0
126-99-8	Chloroprene	0.1
542-76-7	3-Chloropropionitrile	1.0
63938-10-3	Chlorotetrafluoroethane	1.0
354-25-6	1-Chloro-1,1,2,2-tetrafluoroethane (HCFC-124a)	1.0
2837-89-0	2-Chloro-1,1,1,2-tetrafluoroethane (HCFC-124)	1.0
1897-45-6	Chlorothalonil [1,3-Benzenedicarbonitrile, 2,4,5,6-tetrachloro-]	0.1
95-69-2	p-Chloro-o-toluidine	0.1
75-88-7	2-Chloro-1,1,1-trifluoroethane (HCFC-133a)	1.0
75-72-9	Chlorotrifluoromethane (CFC-13)	1.0
460-35-5	3-Chloro-1,1,1-trifluoropropane (HCFC-253fb)	1.0
5598-13-0	Chlorpyrifos methyl [O,O-Dimethyl-O-(3,5,6-trichloro-2-pyridyl)phosphorothioate]	1.0
64902-72-3	Chlorsulfuron [2-Chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl] benzenesulfonamide]	1.0
7440-47-3	Chromium	1.0
4680-78-8	C.I. Acid Green 3	1.0
6459-94-5	C.I. Acid Red 114	0.1
569-64-2	C.I. Basic Green 4	1.0
989-38-8	C.I. Basic Red 1	1.0
1937-37-7	C.I. Direct Black 38	0.1
2602-46-2	C.I. Direct Blue 6	0.1
28407-37-6	C.I. Direct Blue 218	1.0
16071-86-6	C.I. Direct Brown 95	0.1
2832-40-8	C.I. Disperse Yellow 3	1.0
3761-53-3	C.I. Food Red 5	0.1
81-88-9	C.I. Food Red 15	1.0
3118-97-6	C.I. Solvent Orange 7	1.0
97-56-3	C.I. Solvent Yellow 3	0.1
842-07-9	C.I. Solvent Yellow 14	1.0
492-80-8	C.I. Solvent Yellow 34 (Auramine)	0.1
128-66-5	C.I. Vat Yellow 4	1.0
7440-48-4	Cobalt	0.1
7440-50-8	Copper	1.0
8001-58-9	Creosote	0.1
120-71-8	p-Cresidine	0.1
108-39-4	m-Cresol	1.0
95-48-7	o-Cresol	1.0
106-44-5	p-Cresol	1.0
1319-77-3	Cresol (mixed isomers)	1.0
4170-30-3	Crotonaldehyde	1.0
98-82-8	Cumene	1.0
80-15-9	Cumene hydroperoxide	1.0
135-20-6	Cupferron [Benzeneamine, N-hydroxy-N-nitroso, ammonium salt]	0.1
21725-46-2	Cyanazine	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
53404-60-7	Dazomet, sodium salt [Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione, ion(1-), sodium]	1.0
94-82-6	2,4-DB	1.0
1929-73-3	2,4-D butoxyethyl ester	0.1
94-80-4	2,4-D butyl ester	0.1
2971-38-2	2,4-D chlorocrotyl ester	0.1
1163-19-5	Decabromodiphenyl oxide	1.0
13684-56-5	Desmedipham	1.0
1928-43-4	2,4-D 2-ethylhexyl ester	0.1
53404-37-8	2,4-D 2-ethyl-4-methylpentyl ester	0.1
2303-16-4	Diallate [Carbamothioic acid, bis(1-methylethyl)-S-(2,3-dichloro-2-propenyl) ester]	1.0
615-05-4	2,4-Diaminoanisole	0.1
39156-41-7	2,4-Diaminoanisole sulfate	0.1
101-80-4	4,4'-Diaminodiphenyl ether	0.1
95-80-7	2,4-Diaminotoluene	0.1
25376-45-8	Diaminotoluene (mixed isomers)	0.1
333-41-5	Diazinon	1.0
334-88-3	Diazomethane	1.0
132-64-9	Dibenzofuran	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	0.1
106-93-4	1,2-Dibromoethane (Ethylene dibromide)	0.1
124-73-2	Dibromotetrafluoroethane (Halon 2402)	1.0
84-74-2	Dibutyl phthalate	1.0
1918-00-9	Dicamba (3,6-Dichloro-2-methoxybenzoic acid)	1.0
99-30-9	Dichloran [2,6-Dichloro-4-nitroaniline]	1.0
95-50-1	1,2-Dichlorobenzene	1.0
541-73-1	1,3-Dichlorobenzene	1.0
106-46-7	1,4-Dichlorobenzene	0.1
25321-22-6	Dichlorobenzene (mixed isomers)	0.1
91-94-1	3,3'-Dichlorobenzidine	0.1
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
1717-00-6	1,1-Dichloro-1-fluoroethane (HCFC-141b)	1.0
75-43-4	Dichlorofluoromethane (HCFC-21)	1.0
75-09-2	Dichloromethane (Methylene chloride)	0.1
127564-92-5	Dichloropentafluoropropane	1.0
13474-88-9	1,1-Dichloro-1;2,2,3,3-pentafluoropropane (HCFC-225cc)	1.0
111512-56-2	1,1-Dichloro-1,2,3,3,3-pentafluoropropane (HCFC-225eb)	1.0
422-44-6	1,2-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225bb)	1.0
431-86-7	1,2-Dichloro-1,1,3,3,3-pentafluoropropane (HCFC-225da)	1.0
507-55-1	1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	1.0
136013-79-1	1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225ea)	1.0
128903-21-9	2,2-Dichloro-1,1,1,3,3-pentafluoropropane (HCFC-225aa)	1.0
422-48-0	2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC-225ba)	1.0
422-56-0	3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	1.0
97-23-4	Dichlorophene [2,2'-Methylenebis(4-chlorophenol)]	1.0
120-83-2	2,4-Dichlorophenol	1.0
78-87-5	1,2-Dichloropropane	1.0
10061-02-6	trans-1,3-Dichloropropene	0.1
78-88-6	2,3-Dichloropropene	1.0
542-75-6	1,3-Dichloropropylene	0.1
76-14-2	Dichlorotetrafluoroethane (CFC-114)	1.0
34077-87-7	Dichlorotrifluoroethane	1.0
90454-18-5	Dichloro-1,1,2-trifluoroethane	1.0
812-04-4	1,1-Dichloro-1,2,2-trifluoroethane (HCFC-123b)	1.0
354-23-4	1,2-Dichloro-1,1,2-trifluoroethane (HCFC-123a)	1.0
306-83-2	2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123)	1.0
62-73-7	Dichlorvos [Phosphoric acid, 2,2-dichloroethenyl dimethyl ester]	0.1
51338-27-3	Diclofop methyl [2-[4-(2,4-Dichlorophenoxy)phenoxy] propanoic acid, methyl ester]	1.0
115-32-2	Dicofol [Benzenemethanol, 4-chloro-.alpha.-(4-chlorophenyl)-.alpha.-(trichloromethyl)-]	1.0
77-73-6	Dicyclopentadiene	1.0

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

Table II

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

CAS Number	Chemical Name	*De Minimis* Limit
137-42-8	Metham sodium (Sodium methyldithiocarbamate)	1.0
67-56-1	Methanol	1.0
20354-26-1	Methazole [2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione]	1.0
2032-65-7	Methiocarb	1.0
94-74-6	Methoxone ((4-Chloro-2-methylphenoxy) acetic acid) (MCPA)	0.1
3653-48-3	Methoxone sodium salt ((4-Chloro-2-methylphenoxy) acetate sodium salt)	0.1
72-43-5	Methoxychlor [Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-]	*
109-86-4	2-Methoxyethanol	1.0
96-33-3	Methyl acrylate	1.0
1634-04-4	Methyl tert-butyl ether	1.0
79-22-1	Methyl chlorocarbonate	1.0
101-14-4	4,4'-Methylenebis(2-chloroaniline) (MBOCA)	0.1
101-61-1	4,4'-Methylenebis(N,N-dimethyl) benzenamine	0.1
74-95-3	Methylene bromide	1.0
101-77-9	4,4'-Methylenedianiline	0.1
78-93-3	Methyl ethyl ketone	1.0
60-34-4	Methyl hydrazine	1.0
74-88-4	Methyl iodide	1.0
108-10-1	Methyl isobutyl ketone	1.0
624-83-9	Methyl isocyanate	1.0
556-61-6	Methyl isothiocyanate [Isothiocyanatomethane]	1.0
75-86-5	2-Methyllactonitrile	1.0
80-62-6	Methyl methacrylate	1.0
924-42-5	N-Methylolacrylamide	1.0
298-00-0	Methyl parathion	1.0
109-06-8	2-Methylpyridine	1.0
872-50-4	N-Methyl-2-pyrrolidone	1.0
9006-42-2	Metiram	1.0
21087-64-9	Metribuzin	1.0
7786-34-7	Mevinphos	1.0
90-94-8	Michler's ketone	0.1
2212-67-1	Molinate (1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester)	1.0
1313-27-5	Molybdenum trioxide	1.0
76-15-3	Monochloropentafluoroethane (CFC-115)	1.0
150-68-5	Monuron	1.0
505-60-2	Mustard gas [Ethane, 1,1'-thiobis[2-chloro-]	0.1
88671-89-0	Myclobutanil [.alpha.-Butyl-.alpha.-(4-chlorophenyl)-1H-1,2,4-triazole-1-propanenitrile]	1.0
142-59-6	Nabam	1.0
300-76-5	Naled	1.0
91-20-3	Naphthalene	0.1
134-32-7	alpha-Naphthylamine	0.1
91-59-8	beta-Naphthylamine	0.1
7440-02-0	Nickel	0.1
1929-82-4	Nitrapyrin (2-Chloro-6-(trichloromethyl)pyridine)	1.0
7697-37-2	Nitric acid	1.0
139-13-9	Nitrilotriacetic acid	0.1
100-01-6	p-Nitroaniline	1.0
99-59-2	5-Nitro-o-anisidine	1.0
98-95-3	Nitrobenzene	0.1
92-93-3	4-Nitrobiphenyl	0.1
1836-75-5	Nitrofen [Benzene, 2,4-dichloro-1-(4-nitrophenoxy)-]	0.1
51-75-2	Nitrogen mustard [2-Chloro-N-(2-chloroethyl)-N-methylethanamine]	0.1
55-63-0	Nitroglycerin	1.0
88-75-5	2-Nitrophenol	1.0
100-02-7	4-Nitrophenol	1.0
79-46-9	2-Nitropropane	0.1
924-16-3	N-Nitrosodi-n-butylamine	0.1
55-18-5	N-Nitrosodiethylamine	0.1
62-75-9	N-Nitrosodimethylamine	0.1
86-30-6	N-Nitrosodiphenylamine	1.0
156-10-5	p-Nitrosodiphenylamine	1.0
621-64-7	N-Nitrosodi-n-propylamine	0.1
759-73-9	N-Nitroso-N-ethylurea	0.1
684-93-5	N-Nitroso-N-methylurea	0.1
4549-40-0	N-Nitrosomethylvinylamine	0.1
59-89-2	N-Nitrosomorpholine	0.1
16543-55-8	N-Nitrosonornicotine	0.1
100-75-4	N-Nitrosopiperidine	0.1
99-55-8	5-Nitro-o-toluidine	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
301-12-2	Oxydemeton methyl [S-(2-(Ethylsulfinyl)ethyl) O,O-dimethyl ester phosphorothioic acid]	1.0
19666-30-9	Oxydiazon [3-[2,4-Dichloro-5-(1-methylethoxy)phenyl]- 5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2(3H)-one]	1.0
42874-03-3	Oxyfluorfen	1.0
10028-15-6	Ozone	1.0
123-63-7	Paraldehyde	1.0
1910-42-5	Paraquat dichloride	1.0
56-38-2	Parathion [Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl)ester]	1.0
1114-71-2	Pebulate [Butylethylcarbamothioic acid S-propyl ester]	1.0
40487-42-1	Pendimethalin [N-(1-Ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine]	*
608-93-5	Pentachlorobenzene	*
76-01-7	Pentachloroethane	1.0
87-86-5	Pentachlorophenol (PCP)	0.1
57-33-0	Pentobarbital sodium	1.0
79-21-0	Peracetic acid	1.0
594-42-3	Perchloromethyl mercaptan	1.0
52645-53-1	Permethrin [3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropanecarboxylic acid, (3-phenoxyphenyl) methyl ester]	1.0
85-01-8	Phenanthrene	1.0
108-95-2	Phenol	1.0
26002-80-2	Phenothrin [2,2-Dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylic acid (3-phenoxyphenyl)methyl ester]	1.0
95-54-5	1,2-Phenylenediamine	1.0
108-45-2	1,3-Phenylenediamine	1.0
106-50-3	p-Phenylenediamine	1.0
615-28-1	1,2-Phenylenediamine dihydrochloride	1.0
624-18-0	1,4-Phenylenediamine dihydrochloride	1.0
90-43-7	2-Phenylphenol	1.0
57-41-0	Phenytoin	0.1
75-44-5	Phosgene	1.0
7803-51-2	Phosphine	1.0
7723-14-0	Phosphorus (yellow or white)	1.0
85-44-9	Phthalic anhydride	1.0
1918-02-1	Picloram	1.0
88-89-1	Picric acid	1.0
51-03-6	Piperonyl butoxide	1.0
29232-93-7	Pirimiphos methyl [O-(2-(Diethylamino)-6-methyl-4-pyrimidinyl)-O,O-dimethylphosphorothioate]	1.0
1336-36-3	Polychlorinated biphenyls (PCBs)	*
7758-01-2	Potassium bromate	0.1
128-03-0	Potassium dimethyldithiocarbamate	1.0
137-41-7	Potassium N-methyldithiocarbamate	1.0
41198-08-7	Profenofos [O-(4-Bromo-2-chlorophenyl)-O-ethyl-S-propyl phosphorothioate]	1.0
7287-19-6	Prometryn [N,N'-Bis(1-methylethyl)-6-methylthio-1,3,5-triazine-2,4-diamine]	1.0
23950-58-5	Pronamide	1.0
1918-16-7	Propachlor [2-Chloro-N-(1-methylethyl)-N-phenylacetamide]	1.0
1120-71-4	Propane sultone	0.1
709-98-8	Propanil [N-(3,4-Dichlorophenyl)propanamide]	1.0
2312-35-8	Propargite	1.0
107-19-7	Propargyl alcohol	1.0
31218-83-4	Propetamphos [3-[(Ethylamino)methoxyphosphinothioyl] oxy]-2-butenoic acid, 1-methylethyl ester]	1.0
60207-90-1	Propiconazole [1-[2-(2,4-Dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]-methyl-1H-1,2,4,-triazole]	1.0
57-57-8	beta-Propiolactone	0.1
123-38-6	Propionaldehyde	1.0
114-26-1	Propoxur [Phenol, 2-(1-methylethoxy)-, methylcarbamate]	1.0
115-07-1	Propylene (Propene)	1.0
75-55-8	Propyleneimine	0.1
75-56-9	Propylene oxide	0.1
110-86-1	Pyridine	1.0
91-22-5	Quinoline	1.0
106-51-4	Quinone	1.0
82-68-8	Quintozene (Pentachloronitrobenzene)	1.0
76578-14-8	Quizalofop-ethyl [2-[4-[(6-Chloro-2-quinoxalinyl)oxy]phenoxy] propanoic acid ethyl ester]	1.0

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

Table II

CAS Number	Chemical Name	*De Minimis* Limit
52-68-6	Trichlorfon [Phosphoric acid,(2,2,2-trichloro-l-hydroxy-ethyl)-, 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 [Benezeneamine, 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-oxazolidinedione]	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.

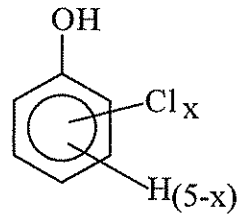
N020 **Arsenic Compounds (inorganic compounds: 0.1; organic compounds: 1.0)**
Includes any unique chemical substance that contains arsenic as part of that chemical's infrastructure.

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

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.

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

N096 **Cobalt Compounds (0.1)**
Includes any unique chemical substance that contains cobalt as part of that chemical's infrastructure.

N100 **Copper Compounds (1.0)**
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.

N106 **Cyanide Compounds (1.0)**
X^+CN^- where $X = H^+$ or any other group where a formal dissociation can be made. For example KCN or $Ca(CN)_2$.

N120 **Diisocyanates (1.0)**
This category includes only those chemicals listed below.

38661-72-2	1,3-Bis(methylisocyanate) - cyclohexane
10347-54-3	1,4-Bis(methylisocyanate)-cyclohexane
2556-36-7	1,4-Cyclohexane diisocyanate
134190-37-7	Diethyldiisocyanatobenzene
4128-73-8	4,4'-Diisocyanatodiphenyl ether
75790-87-3	2,4'-Diisocyanatodiphenyl sulfide
91-93-0	3,3'-Dimethoxybenzidine-4,4'-diisocyanate
91-97-4	3,3'-Dimethyl-4,4'-diphenylene diisocyanate
139-25-3	3,3'-Dimethyldiphenyl methane-4,4'-diisocyanate
822-06-0	Hexamethylene-1,6-diisocyanate
4098-71-9	Isophorone diisocyanate
75790-84-0	4-Methyldiphenylmethane-3,4-diisocyanate
5124-30-1	1,1-Methylenebis(4-isocyanatocyclohexane)
101-68-8	Methylenebis(phenylisocyanate) (MDI)
3173-72-6	1,5-Naphthalene diisocyanate
123-61-5	1,3-Phenylene diisocyanate
104-49-4	1,4-Phenylene diisocyanate
9016-87-9	Polymeric diphenylmethane diisocyanate
16938-22-0	2,2,4-Trimethylhexamethylene diisocyanate
15646-96-5	2,4,4-Trimethylhexamethylene diisocyanate

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).]

1	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran
2	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran
3	70648-26-9	1,2,3,4,7,8-Hexachlorod-benzofuran
4	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran
5	72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran
6	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran
7	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-*p*-dioxin
8	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-*p*-dioxin
9	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-*p*-dioxin
10	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin
11	39001-02-0	1,2,3,4,6,7,8,9-Octachlorodibenzofuran
12	3268-87-9	1,2,3,4,6,7,8,9-Octachlorodibenzo-*p*-dioxin
13	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran
14	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran
15	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-*p*-dioxin
16	51207-31-9	2,3,7,8-Tetrachlorodibenzofuran
17	1746-01-6	2,3,7,8-Tetrachlorodibenzo-*p*-dioxin

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)

$R\text{-}(OCH_2CH_2)_n\text{-}OR'$
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.

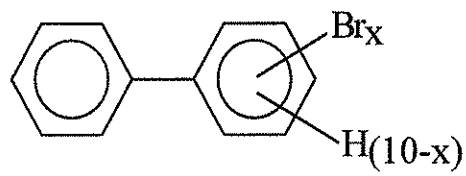
N458 Mercury Compounds (*)
Includes any unique chemical substance that contains mercury as part of that chemical's infrastructure.

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 (C_{10} to C_{13}) (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*)

$C_xH_{2x+2-y}Cl_y$
where x = 10 to 13;
y = 3 to 12; and
the average chlorine content ranges from 40—70% with the limiting molecular formulas $C_{10}H_{19}Cl_3$ and $C_{13}H_{16}Cl_{12}$

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.

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 78.

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.